THE

PEDAGOGICAL SEMINARY.

Founded and Edited by G. STANLEY HALL.

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EDITORIAL.

The present number of the PEDAGOGICAL SEMINARY completes the third volume. The first article, "A Study of Sunday School Work," is by a Sunday school teacher, with much experience, who has spent a laborious year in collecting and reading the literature he has appended, in visiting the Sunday schools of Jews, Catholics and most of the leading Protestant and other sects, and in correspondence with those most interested and informed in the work in this and other countries. No one has yet made so comprehensive and widely comparative a study, and this article, which might easily have been expanded into a book, is sure to interest all who care for the subject of which it treats. Vast as are now the dimensions of this work, it is, by general consent and on the whole, the most unpedagogic of all kinds of teaching. Teachers here are generally untrained, unpaid, and volunteers, who enter upon their work with no special preparation—as, *e. g.*, in Germany,—and their qualification is vouched for by no examination. Few leaders in one denomination have inquired what they could learn from the methods of other denominations. Mr. Ellis attempts to do this, and has sought to avail himself of what child study has to suggest upon the subject, and has also attempted to suggest the psychological basis of all religious education of children in nature and myth. The article enlarges the field of modern pedagogy.

Printed in Germany.

Supt. Kratz seeks to show what are the physical and psychic qualities in a teacher most appreciated by pupils. The article contains hints that every teacher should lay to heart.

Miss Williams, who has been most efficient and successful in collecting data for child study, has described in the all too brief third article how she does it. This question is often asked, and no one known to us to date has answered or can answer it so well as she. The article is commended to all who desire to make returns to syllabi.

The fourth article is, like the first, of unusual importance; it is a preliminary report of a comprehensive study which seeks to coördinate speech during the process of speech-learning in the child and the development of language in the race. The chart on p. 426 is a new and ingenious method of presenting the processes involved in the first three years of speech-learning. The section on the stages of learning to talk, on invented words, on pronunciation of words, and on the development of the sentence, presents the results of Dr. Lukens' new studies in a way that is sure to arouse pleasant anticipations, and, it is hoped, will stimulate needed coöperation for the further investigations contemplated in this the only direction in which the pedagogy of language work can ever hope to find solid scientific ground upon which to do its work with effectiveness and economy.

Mr. Sinclair tells us of the Canadian normal schools, of which little was before known in this country.

The most delicate of topics, which from its profound importance we can no longer ignore, is carefully presented by a competent lady physician, showing the effect of high school work upon the menstrual function. See also Mr. Dawson's review of Raffalovich's book, p. 495.

Reviews, a new section of book notes and the index to the volume conclude the number.

A year ago last fall the editor of the PEDAGOGICAL SEMINARY began to publish a leaflet series of questionnaires or syllabi on topics of child study. These were sent gratuitously to any one requesting them with a view to making returns;

the demand was unexpectedly great, and soon we had a mailing list of about 800 teachers and parents who had been interested enough to request them. Fifteen were issued during the last academic year, and sixteen this year on the following topics:

1894-95. I, Anger. II, Dolls. III, Crying and Laughing. IV, Toys and Playthings. V, Folk-Lore Among Children. VI, Early Forms of Vocal Expression. VII, The Early Sense of Self. VIII, Fears in Childhood and Youth. IX, Some Common Traits and Habits. X, Some Common Automatisms, Nerve Signs, etc. XI, Feeling for Objects of Inanimate Nature. XII, Feeling for Objects of Animate Nature. XIII, Children's Appetites and Foods. XIV, Affection and its Opposite States in Children. XV, Moral and Religious Experiences.

1895-96. The syllabi of this year were published jointly by the editor of the PEDAGOGICAL SEMINARY and a member of the pedagogical or psychological department of the university as follows: I, Peculiar and Exceptional Children, Dr. Hall with Mr. E. W. Bohannon. II, Moral Defects and Perversions, Dr. Hall and Mr. G. E. Dawson. III, The Beginnings of Reading and Writing, Dr. Hall with Dr. H. T. Lukens. IV, Thoughts and Feelings About Old Age, Disease and Death, with Mr. C. A. Scott. V, Moral Education, with Mr. N. P. Avery. VI, Studies of School Reading Matter, with Mr. J. C. Shaw. VII, Courses of Study in Elementary Grammar and High Schools, with Mr. T. R. Croswell. VIII, Early Musical Manifestations, with Miss Florence Marsh of Detroit. IX, Fancy, Imagination, Reverie, with Mr. E. H. Lindley. X, Tickling, Fun, Wit, Humor, Laughing, with Dr. Arthur Allin. XI, Suggestion and Imitation, with Mr. M. H. Small. XII, Religious Experience, with Mr. E. E. Starbuck. XIII, Kindergarten, Dr. Hall with Miss Anna E. Bryan of Chicago and Miss Lucy Wheelock of Boston. XIV, Habits, Instincts, etc., in Animals, with Dr. R. R. Gurley. XV, Number and Mathematics, with Mr. D. E. Phillips. XVI, The Only Child in a Family, with Mr. E. W. Bohannon.

Returns came in slowly at first; some were individual,

some were made by mothers' clubs, some came from groups of teachers and normal school pupils, some from women's clubs, and some from the collegiate alumnæ, until now (June, 1896) we have probably 60,000 returns in all.

The labor of working over this vast mass of data, of all qualities and in all forms, so as to extract the core and purge the dross, was appalling. But gradually a method was developed, and with the aid of four paid collaborators and the coöperation of a number of the best members of the psychological and pedagogical department of the University, the data from nineteen of these questionnaires are either complete or well under way. Most of these will appear in succeeding issues of the PEDAGOGICAL SEMINARY and the AMERICAN JOURNAL OF PSYCHOLOGY, where they will speak for themselves, and about nineteen of them will be reported on at the Clark University summer school of two weeks, beginning July 13. This course is unique and will probably never be repeated.

Last fall, for the first time, the editor announced one lecture a week on child study, based chiefly on these returns, and the course has now run nearly to the end of the year. In the weekly seminary seven members of the department have reported, each on his own topic. The interest has been great, and has steadily increased during the year. The defects of the method are obvious, but they have not proven so serious as was feared, while the results impress the editor as of both a practical and a scientific importance which can hardly be overestimated.

The four days' session of the child study congress in Chicago, ending May 16th, brought together large audiences at every meeting. It was attended by many from other states, and presented a rich and varied programme. Members of over a score of faculties of normal schools, colleges and universities were present and took part, and the interest and attendance grew each day. Clergymen, lawyers, physicians, society leaders and business men attended, and all with a candor and interest that not only reflected the newly awakened intellectual life stimulated by the youngest, but already

among the very strongest of our universities, but revealed the progressive energy and open-mindedness of both teachers and parents in the great struggle to improve education.

The advance sheets of No. 1 of Prof. Earl Barnes' "Studies in Education" are at hand, and are of such rare suggestiveness that all interested in child study will wait impatiently for the other nine numbers promised during the next school year from the Stanford University.

With the May number the Child Study Monthly, edited by Prof. Wm. O. Krohn and A. Baylies (Werner Book Co.), entered upon its second volume. It has improved in quality, is enlarged in size, and seems to have demonstrated its viability.

Principal E. H. Russell of Worcester, Mass., has in press (D. C. Heath & Co.) a volume of several hundred pages devoted to a study of Imitation in Children, with a generous and valuable introduction by the editor. This will be awaited by those interested with unusual expectation.

The programme of the Child Study Section of the N. E. A. promises a two days' session of rare interest.

Dr. Trüpper has just founded a new journal devoted to children's faults, or pedagogical pathology. Its title is *Kinderfehler, Zeitschrift für Pädagogische Pathologie.*

Those who desire to see the best very brief statement yet made of the larger aspect and bearing of the child study movement are referred to Dr. Herman T. Lukens' reply to Dr. W. T. Harris, in the proceedings of the superintendents, at Florida, last February, just published. Ever since Rome, 2,100 years ago, changed her own national indigenous curriculum for the exotic culture of Greece, the educational world has been struggling with its inheritance of objective culture material. Pedagogues have a passion for classifying the great and growing mass of external culture material and arguing or urging that its acquisition was the end as well as the means of education. Such objective classifications, which are so inviting to the schematizing type of mind, which loves to make aerial surveys of the vast areas of human knowledge, activity, etc., have very little, if, indeed, they ought to have anything whatever, to do with the beginnings of learning or with

curricula. Any symmetry with this matter is utterly different from any subjective symmetry. At best the former is logical, while the latter is psychological: one cross-sections the adult mind, the other admits evolutionary and genetic conceptions into matters of the mind. One is now the method of the captains of the sturdy old guard, who so ably defend its slow but steady retreat, closing up the gaps, often with adroitness enough to make reluctant concessions, in re psychology once, school hygiene or child study now, seem to the unthinking an advance instead of a well disciplined retreat; the other is the method of an already large and very rapidly growing body of younger teachers and professors, who represent one of the broadest and deepest scientific tendencies of the present, and one of the chief anxieties of whose leaders now is—knowing without a shadow of doubt or fear that the future is theirs—to go slowly as well as surely, and trusting to the methods of growth rather than to those of conquest.

SUNDAY SCHOOL WORK AND BIBLE STUDY IN THE LIGHT OF MODERN PEDAGOGY.

By A. CASWELL ELLIS,

Fellow in Psychology, Clark University.

Bible Study. The great advance in religious instruction at the time of the Reformation, and the rise of the modern Sunday school movement at the time of Raikes, were due to the introduction of new ideas, of new culture material, and of new methods of work, or, more strictly, old ideas were given a new interpretation to which the world had grown.

The Sunday school needs now a new adaptation of its culture material, one more scientific and more in accord with the known laws of development, one better suited to meet the needs of growing children.

To better adapt our culture material, we must make use of the great progress made in the knowledge of the laws of growth. We know that the human, physical and intellectual germs have certain stages of development that follow each other in lawful succession, and make it possible for us to map out beforehand what kind of training a child will need at certain periods of his life. Now the moral and religious germ must be studied, and the spiritual food given at each period be based upon the needs peculiar to that period of life.

If we can discover the sequence of religious development from childish superstition and selfishness to pure and self-sacrificing Christianity, then we shall be better able to adapt our culture material to the child at each stage in this development. We shall know what food its soul can digest, and what nutriment will aid its growth to a higher plane.

After a careful study of the data furnished by Preyer, Perez, Hall, Sully, Russell, Miss Shinn, Miss Wiltse, and others, together with extended personal observation and experimentation in the day and Sunday schools of Worcester and New York, the Orphans' Home, and among the negroes of the south, the writer has arrived at the following conclusions with regard

to the religious nature and development of children. For the sake of brevity these must be stated here dogmatically and in general terms.

"The new-born infant enters a world of light and sound, but he cannot see or hear. He does not feel in the degree that he will feel at a later time; single pricks of a needle often produce not the least expression of pain in him, and in the first moment of existence he cannot properly smell or taste."[1] The child is not conscious of his own existence. Practically all his movements for the first week are reflex. He has no will of his own, and even his senses develop slowly. The will, however, begins to develop before he can learn to talk, and if we wait for speech, our work of training will be reformation and not formation.

In these infants the only possible thing is to form good habits; let the reflexes develop only in proper directions. The child, a little later, thinks the whole world centres in himself. He desires to have his wishes without any regard for others; he lives an animal life, eating, sleeping, playing. He enthuses over anything, sees little or no qualitative difference in acts, is full of confidence in everything, takes things for what they seem, is open, frank and naïve. This state of things is perfectly normal and proper. We need not care at all if the child does think that the whole world is made rather with a view to his own comfort. He must live an animal life to develop himself, and in order to grow should follow out as nearly as possible his own little ideas and try to realize them. As he sees little or no qualitative difference in acts, reasoning and sermonizing are worse than wasted. But the formation of bad habits must be prevented by an unvarying restraint. If proper firmness has been used, and too many sermons have not bewildered the child, he will grow out of this period of life having the proper respect for authority, without knowing why he does so. Being too young to reason, he has to accept another's reason, just as he has to get his father to carry him across the crowded street. He can no more be reasonable than he can be five feet high.

Soon now he sees the physical results of different courses. Our studies of children's ideas show that he knows or cares little about spiritual matters, and can have only the grossest anthropomorphic conception of God. Of the ultimate orderliness of the universe he can know nothing. Fairy tale, myth, folk-lore appeal to his soul; he loves the musical and the mysterious. This is a period of life that some modern

[1] "Development of Mind in the Child," Preyer. Trans. by H. W. Brown, p. 2.

notions of religious training devitalize. Though conceptions of God may be crude, who can say that prayers for mamma and papa and dollie do not start altruistic feelings and habits? From what did pure religion develop if not through these grosser conceptions and even from ideas and feelings we might call irreligious—animism, fetichism, anthropomorphism, fear, even selfishness, with love? From the decaying mass of this crude growth is fed the germ of the higher and purer religion. It is the reverberation of these ancestral emotions that keeps us in rapport with childhood. Our Christian hymns and rituals are full of these traces.

During this stage of myth and fancy the religious and moral ideas develop in children as they do in adults. The grosser conceptions are outgrown and new ones formed. Qualitative differences now begin to be understood; cause and result can come together in his mind. Now he begins to love the good and unselfish, and wishes to destroy the bad; loves the heroes of his story books, and wants to slay the giants and villains, as the children of Israel did the Canaanites. Myth and fairy tales still delight him, and explain the world in terms suited to his present growth, but history, biography, adventure, all find responsive cords in his soul. All kinds of pets, roaming amid nature, watching the birds build nests, planting and reaping his small harvests, absorb his attention. Never does he question why he does these things, though he may question his own reality. Fortunate for his soul that the divine germ can be bathed unconsciously with the silent influence of the great emotions of past ages, of the fields, the flowers, the mountains, the sea, the sun, the stars, the sky, the vast universe of divine power. Out of this rather unconscious harmony with nature the boy begins to notice special objects and their beauty, to watch the adaptation of one part to another, to see the perfect harmony, economy and fatherly care in nature, the use for both great and small, the interdependence of man, animal, vegetable and mineral. With this he can feel the law and order of the universe as the manifestation of a lawful and loving God.

Now our boy is growing into adolescence and is able to reason, is soon to be torn by passions that have never before been known; impulses in all directions are to spring up, and he is to be driven hither and thither; is to feel the importance of before unknown things; new problems are to confront him, he is to doubt, to be distracted by conflicting emotions and lines of reasoning,—a new world is open to him. His imagination sweeps the universe, he wants to try everything, do everything, be everything,—a time of great impulse and high ideals. Utterly to crush these impulses now is to

destroy life; they must have room for development to give the foundation for future manhood. Everything will be loved a while, and all doubted, even one's own existence. Life is now reduced to a flux, and all the ingredients that make up the man bubble up in the caldron just before the product is cast into its final mold. This is the most critical period; whatever unnatural is allowed to enter this flux, or whatever normal but rudimentary is not allowed to heat up and steam off in this period, will cause forever a flaw in the material. But here is his greatest need for faith. He is lost if there is no thread around which these vapors may crystallize. Amidst these great upheavals, he feels his life larger, his past ideas insufficient: to prevent utter waste or destruction, he must feel that there is something solid somewhere, and though old notions no longer hold in their old form, yet there is something above all that will give light if he persists. He can now begin to learn to sacrifice self for love of others, and to wait for results.

This is the time for him to begin to understand rightly the sacrifice of Christ, the New Testament idea, the Christian ideal. He may now begin to see that only in so much as he loses himself in others, does he find and develop a larger self. He can feel that all the world is necessary for his development, and that only by raising others can he develop himself. He can see himself a part of a great organic unity, and feel that sympathy and love toward all else that one must feel for himself; that every act has a subjective and an objective side, and that the purest altruism must, on its subjective side, raise him to the highest manhood. These do not come into clear consciousness, and are not analyzed, yet the boy is swept on by them, and may gain from this upheaval impulse for Christian manhood as surely and silently as the smaller and clearer things on the ocean's crest are swept along by the great groundswell beneath.

There can be found no hard and fast lines in these stages of development; organisms do not grow in that way. A certain child may be partly in two or three of these stages at one time, skip some of them, even take others backward, or vary the sequence in many ways; yet this is the nearest we can now get to the normal order of development of a child. We need more and better study of children. There crop out in every child many characteristics that are reverberations of primitive ancestry. These traces of the stepping-stones of the race's past development are normal, and unless fixed by improper treatment soon pass away. There seem to remain in every human soul, as in every human body, these rudimentary organs, and we need careful study to

know how to develop them at their proper season in order to free the soul from such drags, and to give it an upward push. Our present plan of crushing and lopping off these rudimentary characteristics is dwarfing and killing. We should not try to hasten a tadpole into the adult frog life by cutting off his rudimentary tail; but give it the best possible nutriment to make it develop and shed this tail for itself, and gain thereby a momentum for still higher growth. So must we do for ourselves. All of this thought is yet crude and speculative, the method of developing these subjective states not even hinted. This, however, seems the series through which the individual and the race have passed. What better can we do than follow in our culture of children the best culture material that is left in the various strata of religious and secular literature crystallized for us by the race at each stage of its upward progress? CAN WE GET THE GROWING CHILDREN TO ASSIMILATE ANYTHING ELSE?

Professor Earl Barnes, at the conclusion of his article on the "Theological Life of a California Child,"[1] says: "From this study of the data on hand, it would seem that we could safely draw the following conclusions: If young children are to be taught a theology, it must have an anthropomorphic and realistic form. We may teach that God is a spirit, but the child's mind at once invests Him with a human mind and human attributes. If we do not furnish exalted and worthy imagery, the child fills out the form with random pictures, Punch and Judy impressions, and images from grocery labels."

"Many California children seem to be ignorant of the most common and most generally accepted theological conceptions of Christian people. They should be given this knowledge, if for no other reason, because it is essential to an intelligent understanding of the literary and artistic life of our times."

These general conclusions agree with the results thus far arrived at in our study. Yet, if an apperceptive organ, or body of experience in some way connected with the new experience. must always precede if the new experience is to be appreciated or apprehended, then most certainly the young child should not be kept from religious influences, nor should his religious nature be allowed to lie uncultivated while the physical and mental are being every day developed. Though it be known full well that a child does get the grossest misconceptions of God and the spiritual world, conceptions that would in adults be irreligious, yet to say that he should not be taught anything till he can understand the higher

[1] PEDAGOGICAL SEMINARY, Vol II, No. 3.

spirituality, is to say that he should never be taught at all; for the poor religious germ would never develop enough to receive that, but would atrophy from disuse. It would be about as sane to blind a child's eyes for the first years of life and not let him look on the world because he would get wrong ideas of contours and see projections as flat, or to stop him from watching the heavens or handling materials till he can understand the laws of gravity and the atomic theory. It is by forming, trying and exhausting his crude, youthful conceptions, or notions, that he is enabled to rise superior to them.

If children do grow up through grosser conceptions to the higher, as the race has done, should we not hold this in view in our choice of culture material for children at various stages of development? In our Bible we have the record of the growth of the purest and highest religion known, and largely from this our Sunday schools are to get their culture material. There arises the problem of how much and in what order to offer this to the growing soul. Some would begin by teaching Christ, and teach Christ only; others would teach the Old Testament later as pure tradition and myth, when the child can so understand it. Some would indiscriminately jumble it in a mechanical way.

On the basis of our yet limited knowledge of the stages of human development, what would be the psychological order and method of teaching the Bible? Would not the child, if he follow in his own soul's development the evolution of the race, first look upon the Old Testament, as the primitive Hebrews did, as the word of God? Did they not believe implicitly that those wonderful performances were the works of special Providence, which many to-day regard as nothing but the simple phenomena of nature; for instance, the unfailing punishment for disobedience of the laws of health. Did they not regard their dreams as from Jehovah, and think that God gave His own personal and physical care to all of His creation? They were not yet able to see the beauty of God's laws in nature, and this seemed the only form in which their souls could grasp the love and care of the Creator for all His creation, and it was the only explanation that was intelligible to them of the wondrous acts and phenomena they witnessed. If this be true, why should not we let young children learn these things and regard them naturally in the same way that the Hebrews did? Is it possible for them to grasp these great ideas in any other form? If we try too early to teach them great spiritual truths otherwise, does it not fail to appeal to their souls, or do they not get a distorted caricature of what we intend to convey, or fail utterly to get any idea?

But there are those who think that this early Hebrew history is like the product of any other primitive race,—while it may be a grand work and contain the highest moral and religious law known to the world before Christ, yet it grew up and was written by men ignorant of nature's laws, and necessarily imbued with the superstitions and ignorance of the times, and that as we now see these things in a clearer light, we should, while clinging to all the good, throw out all the myth and superstition and harrowing tales of cruel tribal warfare. Those people say, never teach these things, but teach the pure, religious principles that the child can never doubt, and never teach him anything that, at a later period, he may think is untrue and thereby lose faith in the entire Bible and religion. Or, on the other hand, they say, "If the child is not of a vigorous mind, you give him a place to rest, and fix him forever in a primitive state of superstitious ignorance." To this it might be said that, if the child is able to rise above this state, there is little possibility of fix ing him there in a nineteenth century environment; for his own inquiring mind and logical doubts will lift him above and make him rise superior to these so-called superstitions, and refuse to believe them. On the other hand, if he is unable ever to rise above this state, and if his soul rests here and does not grasp at something higher and make an effort to throw off its belief, then what right have we to believe him capable of receiving a higher and purer religion, even if we try to give it? Shall we not merely unsettle him from his moorings and leave him to be lashed to pieces against the rocks, with no sheet anchor to the wind to steady and keep him headed to the breakers of life?

Religion must be progressive, a growth. What is religion to one this year is not the next. It is as great folly to expect every one to have power of reaching at a bound the highest spiritual level as it is to expect all to reach the fullest mental stature. Both come by growth, and are governed by divine laws; and, just as there are many people with primitive intellect yet, so are there many still with primitive spiritual capacity and needing primitive spiritual food. In answer to the objection that the stronger ones rise above these primitive conceptions, emotions and intuitions, doubt, and then throw off all religion, it can be said that doubt is not an unnatural process and is but the necessary outcome of vigor and growth. If men never doubt, they never grow. It is this continual doubting the old and striving to find the solution of our doubts that moves life upward, giving vitality and vigor to the race itself. The mind that never doubts is dead; and not only in youth and in

religious life, but in everything and all through life the healthy spirit goes through a series of doubts, breaking away from the worn-out and primitive truth, and reaching out for the higher and truer. Now then, why should this process be feared any more in the religious life than elsewhere? Is there not an element of truth within the grasp of the child's mind in this Old Testament; and when children grow above that, is there not a deeper and higher truth in it to which they can be led, ONLY AFTER THEY HAVE EXHAUSTED THE FIRST? The danger which so many fear must be, not that there is a higher truth to which we should rise, but that we refuse to break away from the old and lead the child to the new when his soul is ripe for it—try to crush his soul down to fit our old conceptions. Thus we cause spiritual rebellion or nausea.

Some people would urge that a child should never receive an impression or idea that he may have to change later in life; because the traces of an impression are never quite obliterated from the mind, and nerve cells when set to acting in one way never entirely recover from the effect, and ever afterwards have a tendency to act in that same way. This neurological theory is not by any means proven, but if it were it would support the genetic system of religious training. It is the disposition to function again in a similar manner, the impression made by the functional activity that persists, and not that made by any specific content. The wildest theorist would not claim that. Now when the child grasps this primitive culture material, his mind functions religiously, not superstitiously; it is the highest and only religious functioning it is capable of, and any trace left would be a trace to make it ever afterwards function religiously.

We have found it far better to feed babies on milk and pap-rags and infant foods, and do not fear in the least that this natural appetite will continue through life and root out the appetite for bread, beef and beans. Far from it; the little fellow who sucks most milk and sugar will be better grown and more able to digest beef and beans, and may even come to loathe the milk and sugar diet. Yet, if he is wise, he will see that by means of it he grew able to throw it aside and to rise to better things.

Though the cases are not perfectly analogous, is it not in the main thus in our own religious growth? Is not the man who deprives children of this early ancestral diet of myth and natural and anthropomorphic religion doing just the same thing that a father does who takes from his babe everything that is not the strong diet of a man. Can we lay a solid foundation and grow above it without first using up this primitive and ancestral material? Could a child ever digest

beef and beans if he had never sucked milk and sugar? How can the man who has never cultivated his mythopœic faculties, his ancestral, animistic ideas of nature, his reverence and fear of the mystic and mysterious, his sense of personal supervision by an all powerful God, and fear of His displeasure and wrath, and a sense of joy at feeling it averted,—how can that man ever grasp a religious idea or emotion? What apperceptive organ has he acquired? Surely, this man would be a monstrosity; for man is by nature a religious as he is by nature a reasoning animal, and though he may crush down both religion and reason, still nature will assert itself, and there will be, in spite of every effort, some intelligence, some religion.

The well-known universal love of little children for folk-lore and fairy tales,[1] the way in which myth appeals to their souls as nothing else does, is in itself the very best evidence that it is the thing most needed by them. The normal appetites are our best guides, are nature's own demands for her proper nourishment.

It is now well recognized that there are nascent periods in the soul's life, periods in which the soul buds out and can receive more, and develop more in a certain direction than it ever could before, or can ever afterwards. There are periods when a boy can learn more botany or philology in a day than he could generally learn in a week. These "budding points" come in every line, these nascent periods when the soul is just ripe to receive certain impressions. That is the time educators must seize. The manual training teachers know now very well that if the hands are not trained in early life, they can never afterwards be trained to do the finest work. So it is in developing the soul: if the universal and natural appetite of the young soul for myth is not gratified in early years, no amount of work afterwards can develop the man in perfect proportions. This period is one of the few in child life that can be at all definitely marked out. But before we perfect our system of religious training, our methods of child study must be so perfected that we can hold children of every age up to the culture material of all time, and, as magnets before a mass of mixed filings draw out the real iron, let them draw out that material which their souls most need for their highest development.

The child must have some religion, and as he is unable to grasp what is according to some the purest religion, then it seems most fitting that he be given the highest of which he is

[1] See Elmer Brown's article in the *New England Journal of Education*, February 7, 1895.

capable, and nothing higher. The purest growth of a primitive religion which we have recorded is in the Old Testament, and why should we not begin there and work up slowly through this into Christianity? Here is food for cultivation of the basis of all religion, that animistic sympathy with nature, that reverence and sense of the mysterious, that feeling of something deep down in our soul, of which our intelligence alone can give no adequate expression. In this Old Testament the child first learns that God loves all that is good and protects it, while He blots from the face of the earth that which is wicked. This is a wholesome lesson, and certainly one that never is untrue. We may believe later that the results are in a higher sphere or in another life, but it is just as true. To find just how the details of this Old Testament should be taught, and when and how each part of Christ's life, miracles and teachings should be brought in, will take years of patient labor by many workers. We do not yet know enough of the development of religion or of child nature to solve the problem, but we should at least seek some great principle upon which to base our system of teaching, and if there is any truth in evolution or modern psychology, the child MUST RISE THROUGH, AND NOT FLY ABOVE AND OVER, THE RACE'S RELIGIOUS GROWTH. Any other teaching fails to build on a solid foundation, leaving rudimentary organs, forcing the soul into narrowness and leaving it ever in danger of upheaval and reversion. The failure to recognize this principle is probably one of many causes that make it usual for sons of great men to fall far below their parents, and for an age of greatness to be followed by one of degeneracy. In overhasty efforts to elevate their children, great men attempt to skip them over the lower stages of development, and force them into a higher form of life, to which they have not grown, thus trying to make them bear fruit and flowers before they have roots and branches.

No experience nor theorizing yet justifies the belief that our accumulated inheritance has enabled us to pass over these stages of development in pre-natal existence. There are as yet only a few who pass over all in their post-natal career. Yet, a noted New England lecturer on the kindergarten tells me that she finds little children very altruistic, and that she has often induced one to forgive an enemy or share her lunch with a school-mate by simply telling a fairy story, with a good moral. Again she told me of a little child who had never had any religious training, being so impressed on first hearing in a song the sentence, "God is good," that it sat for some time seriously looking into space and repeating, "God is good, God is good," with

every evidence of absorbing its deep meaning. Now, however little these actions may mean what the teacher thought, they certainly tend to show the powerful way that myth and story can appeal to and affect the child nature; and it is quite probable that the music, rhythm and alliteration had great effect on the child's interest in "God is good." In the religious training of children there should certainly be given large place for myth, for ritual and for music, if we are to turn up the deep subsoil of their nature out of which has sprung both religion and philosophy.

It is hard to explain by the clear froth of intellectual life floating on the surface the groundswell of deep religious feeling stirred by the primitive myths and religious ideas, to explain their power to arouse sympathy with all nature and faith in nature's God, and to set the inner self vibrating in truer unison with all about and in us. Still harder is it to explain how or why they act as they do upon a child, except to say that they appeal to his intuitions and his feelings. Myth represents the way that feelings and instincts have regarded these facts of life. Myth and orthodoxy, then, are in rapport with childhood, and it does not behoove us to kick over the ladder by which we did ascend. No matter if the intellect is not used, if the heart goes out toward things in childhood, the intellect will follow in its due time. Feeling develops in us before reason, and the breadth and depth of our intellection are conditioned by the development of this great background. In the long period in which feelings and instincts are so much of our life, they should be developed. No wonder is it that the elaborate though solemn ritual and slow, majestic music, the images, the traditions, the saint cult of the Roman church should produce such an effect, especially upon children and childlike minds. The fact seems to be that the Romanists have the strongest hold on these classes, and well attended Sunday schools, while the Unitarians, who abolish all this ritual and give philosophical explanations for all that sounds like myth, are seriously discussing whether their poorly attended and unsatisfactory schools had not best be abolished.[1]

Ruskin says: "The feeblest myth is better than the strongest theory: the one recording a natural impression on the imaginations of great men and of unpretending multitudes, the other an unnatural exertion of the wits of little men and half wits of impertinent multitudes." This is a violent reaction of a great soul against this shallow modern ultra

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[1] "What shall We Do with the Sunday School?" Edward A. Horton, pp. 1, 2. Unitarian Tract Series, Number 5.

rationalism, but it shows the true light in which we should regard myth.

The necessity for ceremony and ritual reaches far back beyond man, and is limited only by our knowledge of the life of lower animals. Certain outward forms and rhythmic movements seem to be the universal and natural way of both expressing and calling up certain inward states. Long before speech we have song. But, to go back only to well-known animals, watch the barnyard fowls. See how the feelings of the hens are expressed in song, or see how the majestic feelings of the turkey gobbler or peacock find their only satisfactory expression in a strutting ceremony. All these seem to us ridiculous, yet they are the life of those animals, and this animal hymnody, ritual and ceremony are their only mode of expressing their inward feelings and instincts. So far as we know the religious instincts which are the centre in man's life are not present in the fowl's, but let us take the sex instinct. The instinct of procreation must be in all life in order to preserve the species. It is the central thing in animal life. See what an elaborate ritual is developed about this. This central and dominant feeling seems to find satisfactory expression, not in the sexual act alone, but must have certain attitudes of the head, certain circles drawn around the hen with the wing, etc., etc. These and many other seemingly senseless ceremonies are necessary to satisfy this instinct in the animal.[1] Now, does not human need of ritual, ceremony and music, as a means of expressing and developing religious instincts, rest upon some such great primitive psychic basis as this, reaching not only back to the early beginnings of our race, but far back into biological ages?

The dangers of such a system of religious training as I have described, when put into the hands of the unskilled, will be many. The very announcement of such a principle to people without deep feeling and broad culture is fraught with danger. Yet, if we may judge by results, the present methods seem to be fraught with great danger. When a new quality shows itself in the young soul, we have grown accustomed to think that it should be fostered if good, and stamped ruthlessly out if not. The fact does not seem to be recognized that certain childlike characteristics, that would be as undesirable in man as would legs one foot long, are only the ugly germs from which the higher manly qualities develop. A child, for instance, who has all dash and self-

[1] For description of many of these animal ceremonies, and a very interesting treatment of one part of the subject, with a bibliography for further study, see "Sex and Art," by Colin A. Scott, *American Journal of Psychology*, Vol. VII, No. 2.

assertion crushed out in infancy can have little aggressive manhood or even bravery and self-respect in after life. These germs of future manhood must be nurtured in a manner to make them shed their atavistic tendencies and develop the higher form.

The writer well understands the ease with which one can answer that this theory would say, do evil that good may come. Make your children rakes and drunkards that they may know how to be virtuous and sober, etc., etc., *ad infinitum*. Such comments show either that the world has not yet learned that every broad principle may be reduced to an absurdity, or that some people have totally misconceived this idea.

When we consider how slow the world is to recognize the principles of growth and what distrust has existed in some quarters of scientific ideas in religion, it is not surprising that no one has yet advocated a genetic system of religious training. Now matters are changed, and the more intelligent of our Christian workers are trying all things and cleaving fast to that which is good. In recent works the dim recognition of the laws of development can be seen, specially in such a a book as Doctor Dunning's "Bible Studies for Normal Classes."

As this work of educating the young begins to receive its proper attention, and when we have a set of teachers who can know and feel our needs, who know something of children, of growth, of the development of religion, who are in touch with the best spirit of our times and understand the unity and catholicity of Christ's teaching, who have a broad, world-wide sympathy that comes from a knowledge of our fellow-men and their religious natures and needs, when narrow denominational walls shall have ceased to fix our religious horizon, and in the spirit of Christ we open our souls to all that is true wherever it may be, — then these little ones may pass through the man-making process of the race, then the human soul will be made to touch at every point the great soul of man as it moved up in its struggle and, growing strong by exhausting the possibilities of each stage, rise through them all to a higher and broader life than human nature has yet known.

II.

SKETCH OF THE GROWTH OF THE SUNDAY SCHOOL IDEA.

Early Hebrew Schools. The Sunday school idea dates back beyond reliable history into the period of early Hebrew traditions recorded in the Talmud and Targums. In Genesis[1] Abraham's

[1] Ch. 14, 14.

three hundred and eighteen instructed retainers are mentioned. Ezra was superintendent of a great open-air Bible school in Jerusalem. The assistants are named, and the opening prayer, responsive service, class teaching are all described in Nehemiah[1]. Josephus tells us that it was the custom from the days of Moses to assemble in the synagogues every Sabbath, not only to hear, but to learn accurately the law.[2]

About 70 or 80 B.C. the Sanhedrim established or re-established the religious schools in connection with the synagogues, and made attendance on them compulsory.[3]

The main object of the Sabbath day assemblages in the synagogues was instruction rather than worship. There were no schools besides the synagogue schools, and these gave instruction during the week almost solely in the texts of Scripture, and this was made the basis of review on the Sabbath. Very young children were instructed at home before they were able to attend the Bible schools. From five to ten years of age the Jew studied only the Bible text, committing large portions to memory. Then was added the bewildering maze of the Mishna, or the Mosaic traditions, with the rabbinical commentaries.

After fifteen years of age the young shared in the discussions of the rabbis over the details of the Mishna teaching. Every schoolhouse had a library for help in study of the lessons. Though unlawful to copy small portions of the Scriptures, selections of parts of the word, such as the Ten Commandments, were made, against strong opposition, for use in the schools. This seems to be the germ of our modern Sunday school leaflet.

The advanced Bible school also met at the synagogues, or at the house of the rabbi, after the Sabbath worship, and again on Monday and Thursday. This was more like our modern Sunday school. The school opened and closed with some form of worship. In the class the rabbi sat on a large cushion on a platform, with his assistants at his feet, while the pupils sat around these in oriental fashion. The rabbis whispered into the ears of the assistants the truths to be taught, and they delivered these to the pupils. While a text of the Old Testament was taken as the basis, the studies of rabbinical commentaries comprised the chief work of the older students. The lessons were never lectures, but always questions and discussions between the assistants and students, with the rabbi prompting and occasionally acting as judge and settling the question.

The recognition of the great importance, and absolute necessity, of the Bible school work for the stability and perpetuity of the religious character of the race is shown in many proverbs of the Talmud, such as the following:

"The world continues to exist, only by the breath of the chil dren of the schools."[4]

"The true guardians of the city are the teachers."[5]

"He who teacheth a child is like one who writeth with ink on clean paper; but he who teacheth old persons is like one who writeth with ink on blotted paper."[6]

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[1] Ch. 8, 1-8.

[2] Contra Ap. II, 17, 18. Comp. I, 12. Antiq. IV, 8, 12. These and most of the references in this and the following section are taken from citations by H. C. Trumbull in "Yale Lectures."

[3] "Education," in Alexander Kitto's Cyc. of Biblical Literature.

[4] "Shabbath," fol. 119, b.

[5] "Jerus Chagiga," VII. 7.

[6] "Rosh Ha-shana," 23 a.

To live in a place where there was no Bible school was forbidden by law.[1]

Through this series of classes Christ no doubt passed, but we have no record of His school education till He reached the higher Bible class, and at twelve years of age was confusing the rabbis, and speaking so that "all that heard Him were amazed at His understanding and His answers."

The Early Christian Bible Schools. "In His ministry Christ went about teaching in their synagogues and preaching the gospel of the kingdom." Matthew, Mark, Luke and John all repeatedly speak of His teaching in the synagogue,[2] by the wayside,[3] by the sea,[4] in private house,[5] or the temple court,[6] or wherever He happened to be. Christ's great commission to His disciples was to make disciples of all nations, "teaching them to observe all things whatsoever I have commanded you."[7] Peter and the apostles are said in Acts 5: 29-42 to teach and preach every day in the temple and at home in Jerusalem. Paul and Barnabas "tarried in Antioch, teaching and preaching the word of the Lord with many others also."[8] So in Thessalonica,[9] Berea,[10] Corinth,[11] Ephesus,[12] Athens,[13] Rome,[14] everywhere the apostles taught. They had been trained in the old Jewish Bible schools, and naturally followed their methods, even going into the synagogues and trying to graft Christianity on to the old religion until the rabbis would expel them, when they would open a school somewhere else and carry the converts there for further instruction. This was a favorite method, especially with Paul. The *teaching* was emphasized by the early Christians, and it is given as a necessary qualification of a bishop that he shall be apt to teach.[15] Instruction specially written for the children is found in Ephesians 6:1 and Col. 3:20. The Bible itself was the text for instruction, and the catechetical method of question and answer and discussion by teacher and pupil was the method used by the Jews and early Christians.

Paul in his instructions to a young worker says: "Every Scripture inspired of God is also profitable for teaching, for reproof, for correction, for instruction which is in righteousness; that the man of God may be complete, furnished completely unto every good work."[16]

The Bible school was everywhere the starting point of the early Christian church. The Christian church spreading into all lands and having no country of its own, could not legislate about the Bible schools; so it began to adopt varying methods to suit widely differing needs and environments. The catechetical teaching was continued in churches and homes wherever there were a few of the faithful; but large schools were established at certain centres, as at Alexandria, to train the teachers in all things which the fully fur-

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[1] "Yale Lectures," p. 28.
[2] Matthew 4: 23; 9: 35. Mark 6:2. Luke 4:15, 31-33; 6:6. John 6:59; 8:20.
[3] Mark 6:6, 34; 10:1. Luke 13:22. John 4:6-27.
[4] Mark 2:13, 4:1-2.
[5] Matt. 13:36; 17:25. Mark 9:33-50. Luke 7:36-50; 19:38-42.
[6] Matt. 21:12-46. Mark 12:35. Luke 19:47. John 7:14-28.
[7] Matthew 28:19, 20.
[8] Acts 15:35.
[9] Acts 17:1-3.
[10] Acts 17:11-12.
[11] Acts 18:1-11.
[12] Acts 19:1-10
[13] Acts 17:17.
[14] Acts 28:30-31.
[15] I Timothy 3:2.
[16] II Tim. 3: 16-17.

nished Christian ought to know. After the apostles, there are no great missionaries heard of till the opening of the middle ages: yet the work of teaching the children and adults alike, was carried on so vigorously that the results drove the enemies of Christianity into the enactment of laws forbidding Christians to teach the young. Celsus charges the Christians in the second century with "extending their numbers and propagating their views by getting hold of children privately in houses and schools and influencing them by conversation with them."[1]

Julian, the apostate, in the fourth century made a decree that all Christians should be shut out of the schools, but died too soon to put it into effect.[2] In spite of such opposition the teaching and preaching of the early followers of Christ soon Christianized, at least nominally, the Roman empire and practically the civilized world.

In those days even the sermons were largely in the form of a dialogue between preacher and congregation. Paniel says: "As religious questions were put to him, or as the edifying conversation turned the thought to a particular theme, the preacher, entered into explanations and contemplatings, dwelling more fully on one point and more briefly on another. A methodic development of his own course of thought could be brought out only so far as the characteristics of his hearers and as the questions or objections by them made it possible. The preacher was only one of the speakers, even though he was the principal one. . . . . Even when the ministry was transferred to a designated class of persons, this right of joining in conversation with the preacher was not wholly surrendered by the congregation."[3]

Perhaps the most responsible office among the early Christians was the management of the larger schools, like the one at Alexandria, for the instruction both of disciples and heathen. The head of this school was visited by heathen of every class, and had to explain and defend his own faith now against the Roman lawyer, now the Grecian philosopher and now the oriental mystic. These men were generally faithful to their trusts, and conducted their meetings openly, asking and answering questions freely, and using the Socratic method throughout.

Gregory Thaumaturgus, a pupil of Origin, says of his master, that in teaching a pupil he "probed his inmost soul with questions."[4]

The catechist paid due regard to individuality, to the age, to the sex and to the rank of each person.

Origin dealt with one person at a time, or with a few who were alike in spirit or acquirements. Augustine also emphasizes individual teaching. He says: "Each pupil is to be treated according to his individual needs. Examine him and make his present error a starting point; watch and question. Every effort is to be made to get free questioning and frank answering. It is the individual pupil who is to be taught, not the assembly which is to be harangued.[5] Trumbull says: "This much we know of the early Christian schools as illustrated by the one in Alexandria, and by less prominent ones elsewhere; they included in their membership children and adults of both sexes;[6] among their teachers were laymen and women;[7] the

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[1] "Yale Lectures," p. 50.
[2] "History of the Christian church," Fisher, p. 91.
[3] "Pragmat. Gesch. d. Christl. Beredsamkeit u. d. Homiletic," p. 135.
[4] Art. Gregory Thaumaturgus in Smith's Dict. of Christian Biogr.
[5] Catechising of the Uninstructed, Ch. 5; in "Nicene and Post Nicene Fathers," III. 288.
[6] See Bingham's "Antiquities," Bk. II, Ch. 22, §9; Bk. X, Ch. 1, §4.
[7] Idid., Bk. X, Ch. 22, §9.

scholars were taught individually;[1] the interlocutory method of teaching was used freely;[2] and the subject matter of instruction began with the Old Testament story of creation, and went on to the most practical details of the Christian life."[3]

As the Christian church gained in power and began to have control of governments, it followed the example of its Jewish ancestor and legislated for compulsory Bible schools. St. Gregory in the fourth century adopted a compulsory system of Bible schools in his successful efforts to Christianize Armenia.[4] About this time public schools for training heathen in knowledge of the Scriptures were established in Mesopotamia, Cappadocia, Egypt and elsewhere.[5] From this time until the Reformation the church schools declined. The ecclesiastical spirit overcame the evangelical; ritual superseded faith and orthodoxy, vital piety. The worldly church could not use free catechetical methods of instruction, and the schools degenerated into mere machines for committing to memory certain catechetical dogmas. These schools corrupted the catechumina, and introduced many arbitrary rules and superstitious ceremonies, also a fixed term of instruction and a graduation. "The term was of three years' duration, and at its expiration the catechumen was expected to receive baptism and become a member of the church. This, however, did not exist from the first, but was introduced later, when the making of church members became more conspicuous than the making of Christians."[6]

Even these schools seem to have been neglected by the established church, and Christian religious training was at perhaps its lowest level during the Dark and Middle Ages. Small branches of the church, however, the Waldenses, the Albigenses, the Lollards, the Bohemian Brethren and the Brethren of the Common Life, did not neglect their educational function and preserved a pure religious fire.[7]

The Reformation. With the Reformation came a great revival of the Bible schools, both in the Reformed and the Roman Church. Luther said: "I would that nobody should be chosen as a minister if he were not before this a school master."[8] "A bishop ought to give proof before being a bishop that he had aptness to teach."[9]

"Young children and scholars are the seed and source of the church;" "For the church's sake, Christian schools must be established and maintained;" "God maintains the church through the schools." These schools for which Luther pleaded included the day schools as well as the Sunday schools. Bible instruction, it must be remembered, formed at this time the chief part of the work done in the regular day schools.

Luther personally prepared a larger and a shorter catechism, while his co-workers and successors prepared many others. Calvin, Zwingle, Beza, Knox, Cranmer, Ridley, Usher, were all alive to the need of instructing according to the primitive church idea. Knox, in "The First Book of Discipline," demanded that there be a school

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[1] Bingham's "Antiquities," Bk. I, Ch. 1, §§3-36; Ch. 2, §5.
[2] Ibid., Bk, X, Ch. 2., §7; Bk. XIV, Ch. 4, §28.
[3] Ibid., Bk X, Ch. 1, §§6-7; also comp. De Pressensé's "Christian Life and Practice in the Early Church." Bk. I, Ch. 7. See also articles on "Catechetics" and "Catechumens" in Herzog's Real Encyc.; Encyc. Britt.; Smith and Cheetham's Dict. of Christian Antiq.; and McClintock and Strong's Cyc. of Bib. Theol.
[4] Bingham's "Antiq.," Bk. XIII, Ch. 4. §9.
[5] Ibid., Bk. XIII, Ch. 7, §12.
[6] Candler, "History of Sunday Schools," pp. 18-19.
[7] Schaff's "Creeds of Christendom," pp. 569-72.
[8] Schurman's "Lehrb. d. Pædag.," p. 144. Cited by H. C. Trumbull.
[9] "Yale Lectures," p. 68.

in every parish, a college in every notable town, and three universities in the kingdom.[1]

When the vigor of the Reformation and its live methods seemed to threaten the very existence of the church of Rome, new apostles of the catechetical school idea arose in that church and revived the old interest in the instruction of the young. Ignatius Loyola's sect of Jesuits and the men of Port Royal pursued this work among the Roman Catholics with even greater zeal than did the Reformers, and thus they beat back the tide that seemed about to sweep away the established church. Luther had worked faithfully with the young. It was by this means that he hoped to do his great work of reform, and he was not disappointed, as young Romanists went over to him in great numbers. That experience was sufficient to teach the church of Rome never to neglect so shamefully again the instruction of the young. Among the many vigorous workers for the church school that arose at this time was St. Carlo Borromeo, who devoted himself so successfully to this work that at his death, in 1584, he left in his cathedral at Milan and in his various parishes seven hundred and forty-three schools, comprising more than three thousand teachers and forty thousand scholars.[2] Cardinal Bellarmine showed hardly less interest and vigor, going personally into the parishes and gathering about him and teaching in a familiar manner the children and their friends. When later the work of the Sunday school had so declined in the Protestant churches, the words of a Roman Catholic priest to an American bishop show the attitude held still by the Roman church. "What poor, foolish people are you Protestants," said he. "You leave the children until they are grown up, possessed of the devil; then you go at the work of reclaiming them horse, foot and dragoons. We Catholics, on the other hand, know that the children are plastic as clay in our hands, and we quietly devote ourselves first to them. When they are well instructed and trained, we have little fear as to their future."[3]

Though the early Reformers were so zealous in the instruction of the young, and "all the representative Reformed churches were explicit, at the start, in recognition of the divinely ordained mission of the church school, or Sunday school,"[4] yet many causes combined to make the work fall into neglect and even disrepute. Prominent among these was the perversion of the methods of the Reformers. The use of the catechism and aids prepared for the stimulation of personal instruction by free questioning and answering degenerated into mere rote questions and answers, with little or no life and vital stirring of thought and soul. The very catechisms became a stumbling block. The preacher had also become more separated from the congregation, and free, vigorous interchange of opinion was lost. The continuous sermon took the place of catechising in the conference between minister and congregation; the congregation became passive and often inattentive.

This kind of teaching in the schools was strenuously opposed by the makers of the catechisms. New catechisms were issued with special instruction against using them in this mechanical manner. There had been a catechism inserted in the prayer book of the church of England as soon as the accession of Edward VI. gave the church the privilege of educating their young. Dean Newell in 1570 pre-

[1] "John Knox," McClintock and Strong's Biblical Encyclopædia.
[2] "Yale Lectures," p. 71.
[3] "Yale Lectures," p. 72.
[4] "Yale Lectures," p 74.

pared a revised catechism, making use of all older ones in its preparation. This work, while nominally a *catechismus puerorum*, was more a guide to the younger clergy in the study of divinity, as containing the sum and substance of our reformed religion."[1] For many years this was the official catechism of the church. All the time the more vigorous churchmen were complaining at the mechanical methods employed in instruction, and pleading for the proper use of the catechisms. The authors of the celebrated Westminster catechism attempted to explain this matter, but they seem to be affected by the very same thing against which they declaim. Baxter and Isaac Watts both prepared catechisms after the Westminster Assembly, and complained of this same rote learning. "The business and duty of the teacher is not merely to teach them words, but things. . . . . The young creature will neither be the wiser nor the better for being able to repeat accurate definitions and theorems in divinity without knowing what they mean."[2] . . . "Is it the best method for feeding and nourishing the bodies of the young children to bestow upon them (uncracked) nuts and almonds, in hope that they will taste the sweetness of them when their teeth are strong enough for the shell? Will they not be far better nourished by children's bread and by food which they can immediately taste and relish?"[3]

The American colonists intended that the Bible should be taught in the day schools, and that the Sabbath should be given to worship, and then instruction "upon the presupposed basis of a week's catechetical teaching." As the church and state became distinct and religious instruction was left in the hands of the churches, this instruction in the schools gradually declined, first being limited to perfunctory teaching of the Westminster catechism, and then dropped out altogether. The work in the Sunday schools became mechanical, and here, as in Europe, interest was lost in Sunday school work, except by a few, who made fruitless efforts to revive the work begun by the early Christians and revived by the Reformers. "John Cotton said on this point: 'The excellent and necessary use of catechising young men and novices . . . we willingly acknowledge; but little benefit have we seen reaped from set forms of questions and answers devised by one church and imposed by necessity on another.'"[4] "Cotton Mather also urged that the aim of catechetical instruction was an understanding of Bible truth. . . . He emphasized the uselessness of attempting to train the young and ignorant by 'well-composed sermons;' whereas, he said, 'if you will be at the pains (and can any pains be too much for the precious and immortal souls of your neighbors, O ye that have the care of souls?) to instruct them in the interlocutory way of teaching, which we call catechising, you have the experience of all ages to make you hope that vast would be the consequence, vast the advantage.'"[5]

In spite of the work of the few faithful, Sunday schools declined, and during the seventeenth and eighteenth centuries, with the exception of the Moravians and a few other small sects, the entire Christian world seemed nearly as unconcerned about the Bible schools and early church training as it had been in the Dark Ages.

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[1] Gibson's "Codex Juris Ecclesiastici Anglicani," tit. XIX, Ch. 1. Cited by H. C Trumbull.
[2] Watts, "Works," III, 208. Cited by H. C. Trumbull.
[3] "Works," III, 211 f.
[4] "Yale Lectures," p. 88.
[5] "Yale Lectures." p. 88.

The Raikes Revival. "In the latter part of the seventeenth and through the earlier years of the eighteenth century, we find earnest churchmen, of all opinions, sorely lamenting the comparative disuse of the old custom of catechising on Sunday afternoons."[1]

Near the middle of the eighteenth century the great revival of religion, headed by Zinzendorf in Germany, Wesley and Whitefield in England, and Edwards in America, led to greater interest generally in the subject of religious training. Zinzendorf preached to children, and had personal training given to the young converts in small classes. Wesley followed his method, and laid great stress on the work among the children. "Unless . . . we can take care of the rising generation, the present revival will be *res unius ætatis:* it will last only one age,"[2] was the warning of Wesley. Practically all of these efforts seem aimed at the young Christians and children of the members of the church.

The missionary spirit that dominates the modern Sunday school idea is not prominent till Robert Raikes published an account of his school, established at Gloucester, England, in July, 1780.[3]

He gathered the poorer children of the manufacturing quarter of his city into a private house in the neighborhood, and gave them instruction in reading and the elementary truths of religion. "The children were to come soon after ten in the morning, stay till twelve; they were then to go home and stay till one; and after reading a lesson they were to be conducted to church. After church they were to be employed in repeating the catechism till half-past five, and then to be dismissed with an injunction to go home without making a noise; and by no means to play in the street."[4] Women were employed at a shilling a day to teach in these schools. Raikes and the Rev. Thos. Stock acted as supervisors and instructors.

There seems to be nothing absolutely new in the school. It was the old Jewish school, with the early Christian missionary spirit, and the Reform methods fitted to modern environment.

There are records of many somewhat similar schools before this time, both in England and America,[5] but the time was now ripe for the work, and Raikes, as editor of the Gloucester *Journal*, having the power of the press and the enthusiasm for humanity, forced the idea into the public mind and heart. Accounts of his work were published in the leading magazines; the Queen even summoned Raikes into her presence and congratulated him. Lords and ladies went into the schools as teachers, and the work almost became a fad. Within four years of the time Raikes announced his plan, there were about a quarter of a million of pupils gathered into the Sunday schools in the United Kingdom alone. The paid teachers gradually disappeared as the work became popular.

In order to supply the Bibles needed for this work, the British and Foreign Bible Society was organized. The Religious Tract Society of London was started for the same purpose. The missionary spirit and interest in religious training overflowed into the foreign missions, and the London and Church Missionary Societies were formed; all within twenty years of the announcement of Raikes' school. The progress of the Sunday school seems to have been even more decided in America than in England, yet this was made against strong opposition from certain sources.

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[1] "The English Church in the Eighteenth Century," p. 469. Cited by H. C. Trumbull.
[2] Tyerman's "Life of Wesley," III, 23. Cited by H. C. Trumbull.
[3] "Robert Raikes," Gregory, p. 72. Cited by H. C. Trumbull.
[4] "Sunday Schools Recommended," Turner, p. 41. Cited by H. C. Trumbull
[5] See foot note p. 111, "Yale Lectures," for many special cases.

The missionary Sunday school idea was so new and the old Sunday schools were in such disrepute that even ministers opposed bitterly the new schools, while ordinary church people and unbelievers were afraid to risk children's entering the new and unknown institution. Hannah More tells us that she met with great opposition from the church people, and that many people were for a long time afraid to send their children to the school lest it might be a plan to teach them sedition or to gobble up the children and export them to Australia or India.[1] The same opposition was found in America. A young girl learning something of the Sunday school work from Devie Bethune in New York, gathered a little school in the galleries of her home church in Norwich Town, Connecticut. "The church authorities deemed this a desecration of God's day and of God's house, and forbade her the use of the galleries. She withdrew with her little charge to a neighboring schoolhouse. Public sentiment, including the expressed opinion of her own pastor, secured her exclusion from that building also. She tried again on the church steps; and maintained a footing there until the gallery was again opened to her, and her Sunday school had gained its right to live."[2]

The general secular instruction (reading, writing, etc.) was dropped from the Sunday school course as rapidly as the necessities of the case would allow, and the whole work devoted to catechism and Bible classes. The old catechisms were used again. New ones were published, good, bad and indifferent. There was no unity in the work, nor even uniformity within any denomination. The success of the schools seems solely due to the earnest enthusiasm and good judgment of a few Christian teachers and superintendents. There were practically no books printed for young children in those days, and the Sunday school library idea was yet to be developed.

"The Philadelphia Sunday School and Adult School Union" was formed in 1817. This enlarged and spread till its reorganization in 1824 as the "American Sunday School Union." Here was the first step towards uniformity in methods and intelligent concerted action for improvement in the Sunday school system. Many similar societies were formed, and county, state, national and international conventions for study of the Sunday school work soon arose. The first national Sunday school convention was held in New York in 1832. For this meeting a series of questions had been prepared and sent out to about 2,500 people. The replies made a volume of 2,400 pages, relating to organization, discipline, visiting, modes of instruction, union question books, libraries, adult classes, superintendents, etc. The second national convention was in Philadelphia in 1833; the third in Philadelphia in 1859; the fourth in Newark, N. J., in 1869; the fifth in Indianapolis, in 1872.

The first international convention was held in Baltimore in 1875; the second in Atlanta, Ga., in 1878; the third in Toronto, Canada, in 1881; the fourth in Louisville in 1884; the fifth in Chicago in 1887; the sixth in Pittsburg, Pa., in 1890; the seventh in St. Louis in 1893. The next, unless a change is made, is to be held in 1896 in Boston, while the next, or third, world's Sunday school convention is to be held in 1898, probably in England.[3]

The enthusiasm stirred by the conventions and the practical insight given of the possibilities of improving the training of the

[1] Pray, "History of the Sunday School."
[2] "Yale Lectures," p. 128.
[3] See report of the Seventh International Sunday School Convention

teachers by union, conference and comparative study, opened the way for the adoption of the uniform lesson system in 1872.

Before the adoption of this system, in spite of the spirit of union and of missions that was inspired by the Sunday school unions and conventions, there seems to have been little uniformity in the study of the Bible. Repeating the various catechisms and committing to memory Bible verses and chapters constituted the larger part of the Sunday school work up to this time, although, of course, the work was varied and improved by wise individual teachers.

The institutes held since 1837 for the improvement of teachers and methods in public schools, suggested to the Rev. Dr. D. P. Kidder in 1847 that such an institution would be of use in improving the haphazard methods of Sunday school work then in vogue. Dr. Kidder's suggestion went unheeded, but in 1857 the Rev. J. H. Vincent organized a normal class in his church in Joliet, Ill. This was very successful, and in 1860 Doctor Vincent pushed the matter of institutes for Sunday school teachers in the Methodist Episcopal conference. In 1861 the suggestion of the previous year was acted upon, and a trial institute was held in the district conference in Galena, with Dr. Vincent as president. These institutes spread slowly in Illinois, New York and other states.

Text-Books. In addition to the unifying and enlightening power of the various denominational and undenominational conventions, institutes, and missionary and charitable societies, the efforts of publishers of various systems of text-books to obtain patronage, each by copying the better features of its rivals, led towards uniformity.

The first attempt to rise above the various catechisms and ceaseless memorization of verses, chapters and whole books of the Bible, was made in 1825 by the American Sunday School Union in the "Limited Lesson Scheme." These were selected portions of Scripture printed on cards. The scheme was extended to a five years' course that included the principal parts of the Bible. A series of questions was arranged to go with these texts. This system was said by the American School Magazine of that period to have been adopted by every well ordered Sunday school.

After this many question books and keys were issued by different publishers, but these generally had no definite order of development, and led to little besides memorizing answers to a lot of heterogeneous and often superficial and valueless questions.

The "Union Question Books" were brought out in 1832, containing 125 to 150 pages each. Some devoted a whole year to a single book of the Bible, others followed the life of Christ by "Harmony of the Gospels," others, still, undertook to go through the Bible in course, a certain part each year. Later, in 1869, an "Explanatory Question Book" with answers was published. All these books consisted of a mere string of questions with no analysis, but they were widely used. Of the earlier ones over six million were sold in 1840.

Rise of the International Uniform Lesson System. The next great improvement in text-books was made by Dr. Vincent in 1865 in his new paper, the *Sunday School Teacher's Quarterly.* He seems to have first introduced a series of periodical analytical lesson notes and scholars' papers.[1] The plan included twenty-four lessons for the year, two Sabbaths being given to each lesson.

[1] "The Lesson System," S. Gilbert, p. 35.

These lessons were to be accompanied in the "Teacher" by analyses, notes, quotations, maps, anecdotes and other illustrations for each lesson. There were also to be given in connection with each lesson a single selection of Scripture to be memorized, called the "Golden Text," "Home Readings," etc. A "Plan of Analysis" was proposed and followed, designated by four P's and four D's: Parallel Passages, Persons, Places, Dates, Doings, Doctrines and Duties.[1] He called his course "Two Years with Jesus."

First year: "Life, Journeys and Miracles of Jesus."

Second year: "The Parables, Conversations and Discourses of Jesus."

After one year Dr. Vincent left this paper, which was undenominational, and went to work in his own denomination. His work was continued by Dr. Edward Eggleston with such great success that over 300,000 children used this system in 1871. Many denominational papers were allowed to copy the lessons. Several papers started independent lessons, and rivalry and imitation seem to have made the tendency toward uniformity great, when Mr. B. F. Jacobs[2] of Chicago was inspired with the idea of national and international union and uniformity.

He urged this at all conventions and institutes, and gradually spread the idea. Dr. Vincent and other leaders joined him, but the movement was opposed by the various publishing houses. A few opposed unity and uniformity on any conditions. Nearly everyone, however, favored unity if it could be brought about by everyone else adopting his system. Dr. Eggleston maintained that, as his system was used by nearly every denomination, and its superiority thus confessed, it could easily be made universal. Union committees, he pointed out, were usually hampered and timid, and he could see no feasible plan for union except for all to adopt his system. He opposed to the last all other union and uniformity. Mr. Jacobs persevered, and in the convention of 1872, by the aid of Dr. Vincent and others, carried the day almost unanimously. A committee of ten was appointed from the various denominations in the United States. Two were afterward added from Canada. Dr. Vincent was chairman, and immediately set to work to make the national system international, and he soon got the system adopted in England. The course of lessons was so mapped out as to cover the Bible in seven years; six months of each year to be devoted to the Old and six to the New Testament; the study to follow the chronological order in each case. The general plan of the lessons was about the same as that originated by Dr. Vincent and improved by Dr. Eggleston. A few verses of Scripture are selected, explained, and given a microscopic examination, after which they are made a basis of exhortation. This set of lessons was received with enthusiasm. Prestige was given to Sunday school work. The union of men of many minds gave a wider view of Bible study and "increased the influence of the true educational philosophy and methods in the church." A norm was established, and the various workers could now spend their energies preparing lesson commentaries and helps for students and teachers. The work having a definite shape, the religious and secular press could all take hold of it. Increase in the study of the Bible and multiplication of aids for the intelligent prosecution of this work, followed with great rapidity; whether due entirely to the new system may be questioned. Certainly there was an increase "in the influence of true catholicity and of international fraternity." "Whether sentimental or

[1] "The Lesson System," S. Gilbert, p. 34.

[2] "The Lesson System," S. Gilbert, p. 39, or *The National Sunday School Teacher*, April, 1870.

not, there is a self-respect, a power and a feeling of unity generated by knowing that you and all humanity are not only striving for the same goal, but at the same time and in the same manner." Objections were made to the system: 1st. The teaching was superficial. 2nd. There was not enough of formulated doctrine. 3rd. The lessons were not adapted to primary classes. 4th. The fragmentary system crowded out the use of the whole Bible. 5th. The system discouraged the memorizing of Scripture. 6th. It was only a sentiment.

It is true that the teaching in these lessons is often superficial. Yet that was true of the previous systems. Though the ready-made aids do allow teachers to depend on them and not make personal, careful study, yet these aids make it possible for many teachers to understand better the Bible truths, and teach as they could not possibly teach without them. Any kind of aid in any sphere of life may be abused. There seems no justification for the objection to lack of formulated doctrine. Each denomination may add its own catechism, or put in any doctrinal teaching that it wishes. The objection that the lessons are not adapted to primary classes does seem well founded in some instances; yet they are more suitable for the young than the previous catechisms. The use of the Lesson Papers, etc., may in some cases crowd out the Bible, but often the influence of these lessons leads up to its careful study, or introduces it into homes in which it was before unknown. There is plenty of memorizing in the system, and there is more in it than sentiment, though even sentiment is a factor worthy of careful consideration.

It is a question whether, with the public conscience awake as it was, and in a field open to all, the intense rivalry and continued efforts and experimentation would not have soon developed a better system. The one grand united effort of the International workers, coupled with the monopoly acquired by the system, has been followed by an attitude of satisfaction and conservatism that does not stimulate progress. Dr. Eggleston may be right in saying that committees are timid; and, certainly, there can be little experimentation in an international system. The workers on this system have accomplished much. Its introduction marks a new era in Sunday school work; yet its efforts thus far have been, necessarily, extremely crude, and the system has not shown the vigor and vitality needed to keep up with the advances making in Biblical study, in child study, psychology, pedagogy, biology, anthropology and sociology. Such a great body must move slowly, but it should have leaders in every one of these fields, clearing away the tangle, marking out the paths, and giving opportunity for broadening of views, refinement of methods, deepening of purpose, enlarging the application of the Sunday school.

The International system appears to have raised the Sunday school work to a higher plane, and in fact helped in bringing about the present conditions which make the system entirely inadequate and behind the best thought of the day. The trend of the modern educational ideal is not toward uniformity, but towards individual instruction in all lines. Complete uniformity, in teaching, or in text-books, is death. Methods and subject matter must differ with different pupils. No system can be adapted to everybody and give much training to anybody. The scrappy International system, not going over the whole Bible, even in the prescribed seven years, can give no connected idea of the development of the religion, or the plan of salvation there laid down.

Owing to this fact many new systems and text-books have been added, both by the denominations and by publishing houses. Most

prominent among these is the Blakeslee system.[1] This system diametrically opposes the International, its advocates even bringing about a discussion in the convention of 1893 as to the continuance of that system, claiming that the best results of Bible study cannot be obtained by the use of any system of uniform lessons, nor by means of one "devoted primarily to the study of short and detatched portions of Scripture." Their system aims to give a "comprehensive view of the Bible as a whole, but with special reference to the person and work of our Lord." "The primary object of the lesson is to give instruction with especial view to the influence of Biblical truth in producing and developing Christian character." Exhortation is left for the teacher. The system is in three courses of one year each: Number one, a comprehensive life of Christ from all the gospels; number two, a study of the results of His works as seen in the history and doctrine of the church recorded in the Acts, the Epistles and the Book of Revelation; number three, the "History and beliefs of the Old Testament church, with especial reference to the origin and progress of the Messianic idea." Each course is graded to suit three sets of children in different phases of child life. First, a series of courses for children, including the stories, facts and great truths thought proper to be taught to every child in a primary department. These are either on leaflets with kindergarten cards, or in a little quarterly. Second, a series of historical courses giving a connected outline of the historical material of the Bible, and calling attention to the great teachings of the Bible in their historical connections. Third, a series of doctrinal courses, emphasizing the teachings rather than the history. There are a series of supplementary Bible class courses on special books and topics. Their principles are ably carried out, and mark a great improvement in Bible study. The very poor grading and occasional poor selection of material mar the usefulness of the system.

So many new text-books for every department of Sunday school work have recently been issued that it is impossible to review all in this paper. Many of the best of these will be mentioned in the bibliography at the end of this article.

The greatest activity has been manifested and the greatest gain made in the introduction of kindergarten methods in the primary departments, and in preparation of normal courses giving some connected idea of the development of the Bible, and hints at methods of teaching.

Sunday School Organizations for Instruction. In addition to the various conventions since 1872 the Sunday school institutes have spread all over the Christian world. Many men are employed as specialists to organize and conduct these. Every state but two has a state institute, and some have a dozen others. There are established in Chicago and in Springfield, Mass., regular training schools for Sunday school workers. Two regular agents of the International Sunday School Association are employed to travel and organize institutes and give instruction in Sunday school organization and methods. Many of our states have their own secretaries employed to organize and conduct institutes in each county, and to look after the general welfare of the Sunday school interests. Some counties have their township organizations, and below these are the local denominational meetings.

The normal class idea is being adopted in many progressive Sunday schools. Several normal courses of instruction have been prepared by workers, and are in use in this country and abroad.

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[1] Now known as "The Bible Study Union Graded Lesson System."

The various church missionary societies and the American Sunday School Union have both actively pushed the Sunday school work, the latter alone having, in 1893-94, 138 regular missionaries in the remote districts. These organized 1,785 new schools, making in all 92,700 organized by this body out of 123,173 schools in our whole country. This society has also done valuable work on our text-book problem in the past, and it introduced the library idea at a time (1820-1830) when it is said that there were not a dozen books of religious character suitable for the young.

The Chautauqua Literary and Scientific Circle organized in 1894 in New York by Dr. Vincent, has spread into many states. "The design of it is to utilize existing Sunday school organizations in the promotion of associated systematic effort for broader mental culture. A hopeful endeavor to focus all truth that has a religious bearing, whether religious or scientific, to stir the indifferent church members. Not an institute, or convention, or assembly, or picnic, or camp-meeting, but all of these in one and something more," with the purpose of conducting a school foremost. Ministers, scholars and practical thinkers along all lines are secured to conduct the work during several weeks of the summer. Branch institutions in different parts of the country have been established, and a great work has been accomplished in instructing teachers and superintendents.

The western states have seen the novelty of a traveling missionary Sunday school in the shape of a railroad car fitted for two missionaries, and containing seats, organ, song books, and all things necessary for regular service. The car is side-tracked at small places, and meetings are held till the new school is established, whereupon it moves on to another place.

That so much effort is now spent upon the organization and instruction of teachers gives hope for the future of the Sunday school. Much effort, too, is being spent upon books and libraries for general reading, and these are far superior to anything we have known before. Courses of study and reading are prepared for those unable to attend the Sunday school, and the home department is now a well organized part of the Sunday school system.

Foreign Sunday Schools. About forty years ago Mr. Albert Woodruff, of Brooklyn, started a Sunday school in Germany on the American plan. The English and American societies have worked the foreign fields together, and now, "not only in Germany, but in well nigh every country of continental Europe, the modern Sunday school has been making steady progress within the last quarter of a century."[1]

In England, "since the act of 1870, and the consequent spread of Board schools, the importance attached to Sunday schools has increased, and there has been a corresponding increase in their number and efficiency. In connection with the Church of England, the Sunday School Institute, since its foundation in 1843, has done much to extend and improve Sunday school teaching. It has now under instruction in England and Wales some 6,000,000 scholars, taught by nearly 600,000 teachers. The chief branches of the institute work are (1) providing suitable lessons for the use of teachers. The books and papers issued with this object have attained a very wide circulation. (2) Instruction in the art of teaching. This instruction is given not merely in London, but by the deputation secretaries, who visit all parts of England and Wales, and some counties in Ireland, to lecture and give model lessons. Other important branches are the examination

[1] "Yale Lectures." p. 135.

of Sunday school teachers at different centres, the founding and organizing branch associations all over the country, of which there are 363, and the publication of literature of all kinds suitable for helping on Sunday school work."[1]

"In connection with the various dissenting bodies the following agencies exist for furthering Sunday school work: 'The Connexional Sunday School Union' (London), for Wesleyan Sunday schools; 'The Sunday School Association,' established 1833 (London), and the 'Sunday School Union,' established 1803, not connected with any one denomination. The work done by the Sunday School Union is very extensive. On its books it has nearly 150,000 teachers, and nearly 1,500,000 scholars. Its objects are (1) to stimulate and encourage Sunday school teachers at home and abroad to greater exertions for the promotion of religious education; (2) by mutual communication, and by means of a valuable training class held all the year round in London, to improve the methods of instruction; (3) to ascertain where Sunday schools are needed, and promote their establishment; (4) to supply books and stationery suitable for Sunday schools."

"In *Scotland*, the fact that distinct denominational teaching is permitted in the Board schools has made it possible to secure efficient religious teaching without such special effort as has been required in England."

Below are given the principal statistics, showing the growth and present condition of the Protestant Christian Sunday schools in all lands:

STATISTICS PRESENTED TO THE SEVERAL INTERNATIONAL SUNDAY SCHOOL CONVENTIONS.[2]

	Sunday Schools.	Teachers.	Scholars.	Total.
1. BALTIMORE, May 11-13, 1875.				
United States,	64,871	753,060	5,790,683	6,543,743
Canada,	4,401	35,745	271,381	307,126
2. ATLANTA, April 17-19, 1878.				
United States,	78,046	853,100	6,504,054	7,357,154
Canada,	5,395	41,693	339,943	381,636
3. TORONTO, June 22-24, 1881.				
United States,	84,730	932,283	6,820,835	7,753,118
British America,	5,640	42,912	356,330	399,242
4. LOUISVILLE, June 11-13, 1884.				
United States,	98,303	1,043,718	7,668,833	8,712,851
British America,	5,213	45,511	387,966	433,477
5. CHICAGO, June 1-3, 1887.				
United States,	99,860	1,108.265	8,048,462	9,156,727
British America,	6,448	52,938	440,983	493,921
6. PITTSBURG, June 24-27, 1890.				
United States,	108,939	1,151,340	8,649,131	9,800,471
British America,	7,020	58,086	497,113	555,199

[1]This and the two following quotations are from Sonnenschein's Cyclopædia of Education, article on Religious Education, pp. 329, 330.

[2]Report of the Sixth International Sunday School Convention at Pittsburg, 1890, p. 89.

Sunday School Statistics of all Nations.

Compiled for the Second World's Sunday School Convention, St. Louis, U. S. A., Sept. 4th and 5th, 1893.[1]

E. Payson Porter, 195 Broadway, N. Y., U. S. A.; Mr. Edward Towers, 56 Old Bailey, London, England, E. C., Statistical Secretaries.

	Sunday Schools.	Teachers.	Scholars.	Total.
EUROPE.				
England and Wales	37,210	585,457	5,976,537	6,561,994
Scotland	6,275	62,994	694,860	757,854
Ireland	3,584	27,740	308,516	336,256
Belgium	89	310	4,112	4,422
Austria	212	513	7,195	7,708
Denmark	506	3,043	55,316	58,359
Finland	853	1,534	47,134	48,668
France	1,450	3,800	60,000	63,800
Germany	5,900	34,983	749,786	784,769
Greece	4	7	180	187
Holland	1,560	4,600	163,000	167,600
Italy	403	654	10,969	11,623
Norway	550	4,390	63,980	68,370
Portugal	11	56	1,066	1,122
Russia	83	777	15,524	16,301
Spain	88	180	3,230	3,410
Sweden	5,750	17,200	242,150	259,350
Switzerland	1,637	6,916	113,382	120,298
European Turkey	35	175	1,564	1,739
ASIA.				
India, including Ceylon	5,548	10,715	197,754	208,469
Persia	107	440	4,876	5,316
Siam	16	64	809	873
China	105	1,053	5,264	6,317
Japan	150	390	7,019	7,409
Central Turkey	516	2,450	25,833	28,283
AFRICA.	4,246	8,455	161,394	169,849
NORTH AMERICA.				
United States	123,173	1,305,939	9,718,432	11,024,371
Canada	8,386	69,521	576,064	645,585
Newfoundland and Labrador	359	2,275	22,976	25,251
West Indies	2,185	9,673	110,233	119,906
Central America and Mexico	550	1,300	15,000	16,300
SOUTH AMERICA.	350	3,000	150,000	153,000
OCEANICA.				
Australasia	4,766	54,211	586,029	640,240
Fiji Islands	1,474	2,700	42,909	45,609
Hawaiian Islands	230	1,413	15,840	17,253
Other Islands	210	800	10,000	10,800
WORLD.	218,562	2,229,728	20,168,933	22,398,661

[1] Report of Seventh International and Second World's Sunday School Convention, page 446.

There was never before so much and such good work being done for Sunday schools, yet withal I have been unable to find a single scientific treatment of its problems.

The reports of the various conventions since 1872 show great enthusiasm and hope, but the whole body seems to have fallen into a groove, and though earnestly striving for the best, evinces in the main a timidity and ultra conservatism which must hamper progress when coupled with lack of knowledge, or of appreciation of new movements in the world of thought. As yet no one has advanced a system of religious training that is based upon a knowledge of the development of religion, and of the powers and growth of children. A system that will be in accord with nature must be genetic, following in the development of the child the growth of the religious consciousness of the race.

The Roman Catholic Schools.[1] In most of these schools little else is taught save the series of catechisms containing the church doctrines. There is no international or even national uniformity in lessons, though all the various catechisms contain about the same matter. A priest or a publishing house prepares a catechism, gets it approved by some bishop, and then any schools desiring to do so may adopt it. An attempt has been more or less successful in France to bring about uniformity; but the catechism prepared and enjoined by order of the Third Plenary Council of Baltimore in hope of bringing about uniformity in this country has failed in its purpose, as it is not considered good from a pedagogical standpoint, and is not universally used. There is, however, still hope of uniformity, and the failure of this catechism is attributed to the necessary haste in which it was prepared.

An idea of the schools at their best can be given by a description of the school of the Paulist Fathers on 59th street, New York. This represents probably the most advanced methods and ideas among Roman Catholics, and is far superior to the average school. Here at 9 o'clock on Sunday morning we find about eighteen hundred young people, ranging in age from three to thirty, and in social position from the child of the peddler on the corner to those of the upper classes on Columbus Avenue. The large assembly hall is hung with sacred pictures and mottoes. Here and there are images, and in the centre the altar with the usual lights and decorations. First the mass is said, in which the children are all enabled to participate by means of the "Sunday School Manual," prepared for them by the director, simplifying the whole, appending a collection of spirited songs to be interjected, and adapting it to children. The prayers and songs are taught them in early youth by their teachers. After this worship of prayer and song, folding doors separate the departments, and the regular lessons are taken up by the teachers.

The smallest children are put through kindergarten movements, listen to legends and some Bible facts, and are taught to make the sign of the cross and to say various short prayers of the church, and to repeat the Apostles' Creed. The "Catechism for First Confession," which is to be mastered before seven years of age, comes next, and deals in a catechetical way with the creation, the purpose of man, the plan of salvation, the authority of the church, the nature of God, the nature of the Trinity, the nature of angels, the story of Eden, mortal and venial sin, the Redeemer and His nature,

[1] I am indebted for many courtesies and for assistance in study of these schools to the Rev. Thos. McMillan, Director of St. Paul's Sunday School, New York; to Bishop Keane of the Catholic University, Washington; and to Rev. Dr. Thos. Conaty, Rev. John J. Power and Rev. James F. Teahan of Worcester. The broad scholarship of Dr. Conaty was specially helpful in the preparation of the bibliography.

cardinal points in His life, the Holy Ghost, grace, faith, hope, charity, the head and marks of the church, sacraments and their nature, power, and purpose, baptism and remission of sins, penance, how to make a good confession, and its purpose, use, and dangers. The commandments, as taught by Roman Catholics, are explained, together with the first precepts of the church with regard to mass, conduct in church, making confession and studying the catechism. The next group study a "Catechism of Christian Doctrine Abridged from the Catechism Prepared and Enjoined by Order of the Plenary Council." This is made the standard for first communion, but is very similar to the one just described, and merely abridges the lessons of the catechism of the Plenary Council, which is used by the next grade and consists of the prayers and thirty-three lessons, as follows: "On the End of Man," "On God and His Perfections," "On the Unity and Trinity of God," "On Creation," "On Our First Parents and the Fall," "On Sin and its Kinds," "On the Incarnation and Redemption," "On Our Lord's Passion, Death, Resurrection and Ascension," "On the Holy Ghost and His Descent Upon the Apostles," "On the Effects of the Redemption," "On the Church," "On the Attributes and Marks of the Church," "On the Sacraments in General," "On Baptism," "On Confirmation," "On the Gifts and Fruits of the Holy Ghost," "On the Sacrament of Penance," "On Contrition," "On Confession," "On the Manner of Making a Good Confession," "On Indulgences," "On the Holy Eucharist," "On the Ends for Which the Holy Eucharist was Instituted," "On the Sacrifice of the Mass," "On Extreme Unction and Holy Orders," "On Matrimony," "On the Sacramentals," "On Prayer," "On the Commandments of God" (six lessons), and two lessons "On the First and Second Commandments of the Church" (mass, holy days, fasting, confession, the Holy Eucharist, support of pastors, marriage), "On the Last Judgment and the Resurrection, Hell, Purgatory and Heaven."

The next class studies the "Catechism of the Catholic Religion," translated from the German of the Rev. Joseph Deharbe, S. J., preceded by a short "History of Religion," edited by the Rt. Rev. P. N. Lynch, D. D., bishop of Charleston. This contains the "Daily Devotions" and a short "History of Religion," which in thirty-two pages gives a synopsis of the Bible and a short history of the church; a chapter on the end of man; three on the meaning, object, necessity, rule and qualities of faith. Every article of the Apostles' Creed is explained and supported in thirty-three pages. The Ten Commandments of God are next explained and impressed through twenty-two pages. Then six pages are given to the Church Commandments, and eight pages to the "Violation of the Commandments" and "Virtue and Christian Perfection." Finally the means of grace are treated: "Grace in General" in three pages, "The Sacraments" in thirty-three pages, "Sacramentals," "Prayer," "Religious Practices and Ceremonies." A still more advanced catechism by Deharbe is used by the adults.

This school meets both on Wednesday and on Sunday. Parents are required by the laws of the church to teach the catechism to their children at home during the week. This week-day meeting is not universal among Roman Catholics, nor do they all have mass for children as an exercise of devotion before the lesson work. This school has a regular series of examinations, and a certificate of graduation is granted to those passing the first examination. It offers a gold medal for the best paper, and makes full use of the Jesuit practice of rewards and stimulation of rivalry. The course,

too, is so arranged as to take advantage of the great stimulus afforded by a sense of mastery of something.

The service of mass with a decorated and lighted altar, the solemn music and the united singing, the robed priests and acolytes, are all most aptly chosen to appeal to the soul of the child and to create a sense of reverence. This was clearly shown by the eager faces of the children as they assembled, and the practically perfect attention and order of the 1,800 of all ages and conditions present in the room.

The director and teachers showed an earnestness, enthusiasm, personal interest and sympathy with the children and a pedagogical insight that made possible the success of the school. It is true that only the best teachers have been noticed, but all have shown some appreciation of the great pedagogical principle of going from the known to the unknown, of using the child's own every-day life as a ground upon which to build the new idea. Before seeing and hearing a lesson on the attributes of the church taught in this manner to a set of eight year-old-boys, it is inconceivable how such dry and seemingly unpedagogic and unsuitable lessons can be tolerated by them. The reasons for thinking the material of these catechisms unsuited for the best development of children will appear in the section upon the adaptation of Bible teaching to the religious development of the child.

There are no full statistics yet gathered for the Roman Catholic schools, but the number of students attending are estimated by those best qualified to know as twenty per cent. of the total church membership, or, in the United States, over 1,500,000.

The Jewish Schools. Not to go into details, the Hebrew schools are found to be in general of two kinds, Orthodox and Reformed. The Orthodox differ very little in general from schools in vogue before the days of Christ. The Reformed schools vary. The only one visited, and probably the best one in America, is at the Temple Emanuel, on Fifth Avenue, New York. This school meets every Sunday morning, but follows completely the principles and methods of the public schools. Children must get permission from the Educational Committee of the church in order to enter the school. They all meet together in a large hall for the opening exercises of devotion, and then the school divides into five grades, each grade going into an entirely separate room. There are only these five regular classes in the school, each studying one of the five grades of Katzenberg's "Biblical History." There is also opportunity to study "Post Biblical History," by Hischst. In these large classes the teacher is seated at his desk on a platform at one end of the room, and conducts the recitation just as do teachers in the graded schools. The pupils are marked, and are promoted from one section to another as they would be in public schools.

Religious Training among the Mohammedans, the Hindoos and the Parsees. Any sketch of the history of the Sunday school idea would be incomplete without brief mention of the systems of religious training among the orientals. The following will serve to give the most characteristic and suggestive ideas of several of these systems.

Religious Training among the Mohammedans. "From infancy until the boy enters active business life and the girl goes into Purdah, or seclusion, the children of Moslems are under the direct guidance and control of the mother, and receive their religious training in the harem or *zenana*. There are schools in some of the mosques, where the children are taught the primary branches of a common education as well as the doctrines and history of

Islam. In Egypt, Turkey and Arabia are schools for children and youth where the higher branches of learning are taught. Such schools are being established among the Mohammedans of India also, such as the Islamic College at Lahore, the Adamjee Peerbhoy Institute, and the Moslem University at Bombay and the Mohammedan Anglo-Oriental College at Aligarh."[1]

"There are no more devout, devoted religionists in the world than the Mussulmans, and therefore, quite naturally, the teaching of the Islamic doctrines is considered of the first importance." As a rule the child is instructed in the Koranic teachings before he learns much of anything else, and he reads the Koran in Arabic as soon as he learns to read. Various inducements are offered to him to learn the book so that he can repeat it from cover to cover, or any particular *sura*, or chapter, called for without referring to the text. "When he has accomplished this task he is given the title of 'Hafiz,' which brings with it great respect and reverence from his co-religionists." "The Islamic system commands the parents to teach their children the prayers at ten years of age, and to require them to pray five times a day, as all good Moslems do. The mosque is looked upon as a convenient place in which to perform the Islamic prayers, but not as a necessity. Mohammed taught, and every intelligent Moslem holds, that any place that is clean is an acceptable place of prayer, but it must be clean; that the earth is God's temple and the sky its canopy under which all mankind should pray."

In various parts of the oriental cities you may see the Mohammedans at sunset praying in the open squares with their faces toward Mecca. "The mosque is essentially a place of prayer and not for preaching or exhorting." The prayers are largely made up from the Koran, but never is the reading the book considered prayer.

The first religious idea taught to the child is that God is all powerful, ever present and all-knowing, and that He holds each individual personally responsible for every thought, act and word of his life; that no one can intercede between God and man and relieve the latter of any responsibility for his sins; that man is his own saviour in the sense that by his own efforts he develops his own soul and secures conscious life and reward after death. Mohammed is considered as a teacher of the true way to soul development and not as a saviour or intercessor. The Koran is esteemed and revered as the word of God and a perfect guide to the higher life, delivered to Mohammed at various times by the Angel Gabriel acting as God's messenger.

"The religious training of the child, by intelligent parents, is so zealously and thoroughly conducted that he rarely becomes a pervert to any other religious system."

"As to the home training of the child, it is in strict accord with the Islamic system in every well-regulated household. He is aroused in the morning before sunrise to say the first prayer of the day with the family, and, possibly, to hear or read passages from the Koran. When breakfast is served, each member of the family pronounces the word 'Bilmillah' (in the name of God) before eating. This is the invariable rule before every meal. When the servant calls to meals, he or she simply repeats the word. The child is also warned against the habit of saying 'I will do' so and so, and to cultivate the habit of saying 'Inshallah' (God willing). Profound

[1]This and the following quotations in this section are from a private letter from Dr. Mohammed Alexander Russell Webb, editor of *The Moslem World*.

reverence for the One God is inculcated at every opportunity and pervades all the details of the home life. He is instructed to perform his prayers wherever he may happen to be when the appointed time arrives, or he hears the call of the Muezzin from the mosque. If he is near the mosque, he should go there to pray, as it brings him into company with his co-religionists and encourages fraternity. Between the hours of the *Maghrib* and *Isha* prayers, it is customary to read the Koran in the *zenana*, or family room, where the children are always found. The mother never attends parties, picnics, excursions, balls, theatres, receptions, etc., and does not devote her time to the requirements of 'society.'"

The home is the central point upon which a Mohammedan wife's life turns, and aside from an occasional visit to a female friend, her life is given to improvement of her home, and the moral and religious training of her children.

"In a much larger majority of families, it is generally supposed, the fundamental principles of the higher Islamic philosophy, or Sufism, are taught. There are very few of the better class of Moslems who do not visit regularly a Sufi mystic or saint, and receive spiritual instruction. The child is taught that there is a higher spiritual knowledge which he may obtain when he has trained himself to receive it. If he manifests an interest in spiritual matters, he is, in time, taken to the Sufi and given his first lesson in Moslem theosophy. Religion then becomes his absorbing theme and his aim is so to purify himself by holy thoughts, words, and deeds that he may become as wise as his teacher. In Egypt and Syria, Moslem youths are sometimes encouraged to become Dervishes."

"I feel free to say that there is no class of people on earth who are more devoted to the moral and religious training of their children than are the Mussulmans. It is true that they have not such complete and elaborate systems of school training as are followed in Europe and America, but I cannot avoid the impression that their mosque training is much more beneficial and lasting than is possible where there are paid teachers and large gatherings of children from various strata of society." Not only is there no elaborate school system for children, but the church service consists solely in prayers and readings from the Koran, and is without preaching and music.

The Early Religious Training of the Hindoos. A little child is first taught by his mother a prayer in Sanskrit, of the meaning of which he does not understand a word. Soon he is sent to the priest, or to the Brahmins' school, which is held in the piazza of the temple. Here their Bible, the Vedas, is not studied, and aside from studying the forms and rituals, and memorizing a few prayers, which they do not understand, they have no religious schooling. There is no training in morals based upon divine law. A child is corrected or told to do thus and so because it is customary, or because the other people do it, or that it has been found best to do this way,—a purely hedonistic, or utilitarian, training. They ask for no repentance and regeneration. A child becomes a member of the church by birth. Public opinion is even more rampant there than here, and rules everything.

The Brahmins' schools give some secular training for boys. The girls do not get this, but are trained somewhat at home in domestic duties and ceremonialism, such as, how many times to walk around certain idols, what time of the moon to put termeric in their hair, etc., etc. No moral obligations are taught to either girls or boys.

The older people get some religious instruction from the *Katha*, which are held on holidays, or given by a person to pay a vow for

favors from the gods, or given simply to make a festival. They are held in the houses and lawns of individuals of the different castes. Priests, friends and visitors assemble, the band strikes up; the men are arranged on one side, the women on the other, while the priests sing, recite and act from the Vedas, quoting also parallels from other literature. These songs, etc., are often from lascivious parts of old Vedic hymns, and recount the fights and rapes and incests of the old gods and goddesses.

These *Katha* begin about dusk, and may continue all night with singing, drinking, dancing, gaiety, or even debauchery. No outsider or member of a caste below that of the host is allowed to enter.

They have no regularly appointed church day. On irregular festivals the temples are opened, and priests come out near an idol and sing and chant prayers, accompanied by music. This is continued by reliefs from dawn till night. The people come in and go around an idol, or many idols, a certain number of times and give offerings of sugar, candy, money, etc. Simply go, listen, give, and return. No combined singing or prayers, no sermon, no instruction; all the service is in Sanskrit and entirely unintelligible to the people, and often to the priests. Going around the idol seven times and being sprinkled with holy water is considered very necessary.

This gives the system of education for the masses now in practice, as viewed by a cultured native of India not of the Hindoo race or religion.[1]

The priestly caste, Max Müller tells us, know the whole Rig-Veda by heart, just as their ancestors did three or four thousand years ago.[2]

Commencing at eight years of age they learn this orally from their teachers, a few lines a day, repeating them for hours, and keeping every syllable and inflection perfect. In describing the croaking of the frogs in the rainy season, the Rig-Veda says, "One repeats the speech of the other as the pupil repeats the words of the teacher." "The Veda, or knowledge, was invested with divine authority; its mere words, apart from any meaning they might convey, were believed to have a religious efficacy, and the theory of inspiration invented to support their sacred character goes far beyond the most extreme theory of verbal inspiration ever held in the Christian or Jewish church." "The ultimate aim, then, of the Hindoo education . . . was to produce mnemonic custodians of the Vedas, and of the other sacred books, ... who would insure . . . the purity and integrity of the treasures committed to them, whether by oral or literary transmission."

The friends of the Hindoo claim that the present religious training is in a very low state, and that it does not at all represent the possibilities or the past greatness of the cult. Such unmoral and formal training as is now in practice is not the only necessary product of the religion. On this point Schmidt [3] says: "Moreover, the gods were not considered only as nature forces, whose good will one could secure through a certain ritual; they appear also as *ethical ideals*, as beings full of wisdom and righteousness, full of grace and mercy, who protect the right, and combat and destroy the wrong, who love the truth and hate the lie, and who, since they know and see everything, deal with man also according to his acts,

[1] For the preceding account I am indebted to Dr. Manak Bamji of the Harvard Medical School, formerly of Bombay.

[2] This and the following parts of the paragraph are taken from Sonnenschein's Cyclopædia on Education. article on Schools of Antiquity.

[3] "Geschichte der Pädagogik," Karl Schmidt, Bd. I, S. 357.

rewarding him with fortune or punishing him with misfortune. This view was of high civilizing worth. According to this view morality appears also as religious duty."

The Parsee Religious Training.[1] There are two sets of Parsees, the Reformed and the Orthodox, somewhat analogous to the liberal and the orthodox branches of the Christian church. The Orthodox is now dying out, and represents the lower order of Parseeism; so we shall treat of the Reformed school.

At home the child is early taught to pray and understand the meaning of his prayers. Short stories and fables are read to him, pointing certain morals. The parents teach the children that evil comes of bad habits, and would correct them by saying that the thing was wicked, that it was forbidden by the Scriptures, and that it would displease God and their parents.

Regular sets of books containing fables and moral teachings are prescribed for use both in the home and at school. These are prepared by the "Ranumai Mazdeyeasnan Sabha," or the "Zoroastrian Society for Showing the Way." This society consists of the best scholars in the country and abroad in the European universities, and the works are printed in very cheap form and in the vernacular.

The child is sent to the public schools when about six years old. Here the priest is paid to come twice a week and give instruction to all who desire it in the text-books prepared,as mentioned above. In these books there are no controversional subjects. Neither the *how*, etc., of God and of the future state, nor any such matters are touched upon. The training is purely ethical. Parts are taken from the old Scriptures, the Zoroastrian writings, and illustrated from biographies of great men. The priests enlarge on the lessons of the text-books. The high schools have a system similar to this. The private Parsee schools are not exclusive, and the non-Parsee students are allowed to leave when the religious training is given. Mostly among the Orthodox, there are Fire Temple schools, run by priests, where doctrinal teaching is given. These are in bad repute with Reformers.

There is a regular church service five days in a month. The temple is always open, day and night, and though no service is going on, people go through and say prayers. This habit is now dying out, but is kept up by the Orthodox. The Reformers do not think there is any virtue in the temple itself, nor is it necessarily a place exclusively for worship, but may be used as any lecture hall. On holidays men and women meet here, sing hymns together in the vernacular, chant on the organ; then the priest gives a sermon in the vernacular, based upon some Scripture text. This is on some ethical and practical subject; then follows a prayer in the vernacular, in which the congregation joins. Service is concluded with hymns. This service differs little from an ordinary Unitarian service. There is no set ritualism and no symbolism among the Reformed Parsees. The Orthodox have no sermon and recite in the Zend.

III.

TRAINING OF TEACHERS.

A high and broad ideal must first be before us if we are to make any great advance, yet we cannot reach this at a bound, but must grow to it. No high ideal or the means of attaining it can ever be

[1] For the basis of this account of the Parsee training, I am indebted to Dr. Manak Bamji of the Harvard Medical School, formerly of Bombay. Dr. Bamji is a Parsee.

clearly defined beforehand. The growth of religion and the development of children are both too little known for anyone to map out now clearly defined lines for teachers to follow in all cases. But in order to move towards our ideal, what we already have must be put to its fullest use, and by exhausting the possibilities of this, will be gained the knowledge and power to rise higher.

Little progress can be made in the methods of work, or little improvement in the quality of culture material till we have teachers that are capable of understanding this material. The first great problem is teachers. The present teachers have no opportunity for adequate preparation for their work, but is through the improvement of these teachers that the Sunday school work must first be advanced. This work could begin in the organization of normal classes.

The Normal Class. The superintendent should select from his most advanced pupils those willing to become teachers. These should have a separate room, the best trained teacher in the school and the special care of the superintendent. First, this class should go over the Bible in some such course as that now prescribed by Dr. Dunning or Dr. Hurlbut in their normal lessons. The teacher should by example make each lesson a pedagogical model. When this series of lessons is finished, the class should study, analyze and discuss several systems of Sunday school text-books. After this they should study in sections such books as the "Modern Sunday School," by Dr. Vincent; "Yale Lectures," by Dr. Trumbull, and other worthy books that embody the experience of our best men in years of patient labor and research on such practical questions as: the teacher, discipline, methods of teaching, relations and history of the Sunday school, its purposes and needs, etc. By this means the young teacher should have been enabled to look at the Bible as a whole, and see the gradual development of the religious consciousness of the race as it rose by slow growth from mere fear of a supernatural power to the exalted love and faith of Christianity. With this broadened view it can be seen that each step cleared the way for the next, and that God in His wisdom gave to man only just what was needed for his stage of development, and built each succeeding rise only upon the previous, well-worn foundation. This will give some idea of the general lines they themselves are to follow in leading the individual through his various stages of religious development.

The study of various systems will force the teacher to think for himself what line of development is desirable in text-books, while the variety in details and application of principles found in the various systems must broaden the view and give to the teacher many practical hints. The study of the best works and best ideas of practical, experienced teachers will arouse a sense of the greatness and possibilities of the work; the high standard these men present will make young teachers thoroughly dissatisfied with our present systems, but their practical suggestions and hopeful spirit will give a higher enthusiasm.

In this teachers' course there should be opportunity for practical observation. Each student should in some way that will not cause embarrassment, be allowed to visit the infant class for a short period and should recite under several of the best teachers of the school. The practical observations made here should be discussed privately in the normal class. Each member should during the course conduct this normal class at least once, and the class should furnish substitutes for absent teachers in the Sunday school. The teacher of the class must somehow instill the more general and fun-

damental laws of pedagogical psychology, and discuss the problem of teachers' and children's libraries.

The entire course should take at least one, and better, two or three years of instruction and apprenticeship. This class would not only furnish the Sunday school with trained teachers, but would add new interest and value for the more mature scholars.

The Teachers' Class. The active teachers of the Sunday school should be organized into a teachers' class, and spend an hour each week in conference. The superintendent or some experienced teacher should preside. This should not be a mere recitation and preparation of the coming lesson. Such preparation should be made beforehand, and only very special points of fact and interpretation should be touched upon. There should be discussion about how to teach this particular lesson at this particular time, to a certain particular set of boys or girls, or to a certain nameless boy or girl of such a description; what out of all the possible lessons to be gotten from the text is the one best suited to the present condition of certain children. They should try by mutual aid to find in what lesson of life a certain class of children are now interested and what they can best receive and use; what part of the child's daily life and experience may be used as an avenue of approach, or an apperceptive organ with which the new truth may be grasped; also in regard to matters of discipline, how to make a certain class, or certain nameless individuals even, preserve order; how to obtain interest and attention, and study at home.

There should be monthly verbal reports by each teacher of failures and troubles, progress and plans, in order to afford mutual encouragement and stimulation, and to show what is really being done in the school; so that plans may be improved and modified.

Conventions and Institutes. The work done at the Sunday school conventions and institutes is so well described by Bishop Vincent and others that it will be omitted here. Suffice it to say that the conventions are necessary, particularly to stir up enthusiasm, while the institute is to instruct, and fills the place of the public school institute and the college summer schools. It is to push on further the work done both in the normal class and the teachers' meeting. No one school can have many specialists or many experienced workers, but in an institute for one, two, or four weeks there could be gathered the best specialists in all fundamental and allied branches of Sunday school work.

College Chairs. If the church were divided into four grades according to ability, nearly all the workers in the Sunday school would be found in the second and third grades. The men most capable are generally found "too busy" to attend to this work. This excuse when followed up would generally mean that they do not have great faith in the present Sunday school system, know little about it, and, as they do not know off-hand how to improve it, and have not time to study out the problem, they simply let it go. This class of men must be given an opportunity to look at this problem before other great cares of a busy life shut out new lines of work. If Sunday school institutes were made permanent schools, busy people would not be able to spend any long time at them, and under ordinary circumstances these schools would tend to grow narrow and run into mechanical habits.

The vast power in our colleges and universities must be brought to bear on this subject. There may arise complications in the universities, but a department of pedagogy can not be called complete that does not deal with this important part of its field. Religious training is as much a problem for the pedagogue as is physical or

mental training. Surely we cannot entirely separate them. We have already at our command in the universities a vast power for study of the Bible, of theology, of philosophy, of psychology, of pedagogy, of anthropology, of biology; why cannot there be found some man of broad culture, of wide sympathies, of patient and reverent spirit to focalize all these and make, in a chair of religious pedagogy, or whatever it may be called, a new department in our universities, or certainly in our colleges? This would give to every college-bred man the opportunity while in college to look at the larger phases of the problem of religious training. With the proper man at the head of this department, no subject would afford better material for general culture, call into requisition and correlate better all of our art, literature and science. No subject is more vital, or puts the college man in closer relation and sympathy with the history of the race and the living problems of the day. Then, our brightest men need not leave college absolutely ignorant of this problem, or of the possibility of its solution, blunder around at editorial or professional work for a time, preach for a time, and, finally, in the decline of life see that they have been spending all their energies on reformation, while the great work of formation was never considered.

With this department in our colleges, leaders might be soon developed for the normal classes, conventions and institutes. If we do not have this, the Sunday school cannot keep pace with the times, but must inevitably lag behind, while its leaders have to be ground out of the slow school of costly experience. Every movement must have leaders of broad culture, in touch with all that is most advanced in the thought world, as well as cognizant of human infirmities, human needs and possibilities as found in every-day experience.

This course should be worked out and offered at once in our theological seminaries, and then in the normal schools and pedagogical departments of the colleges and universities.

When teachers of Sunday schools are taught the rudiments of practical psychology and child study, they can find a new interest in watching and studying their pupils as each new power and tendency unfolds under varied treatment. The stupid, the uninterested, the mischievous will no longer be enigmatical bores or nuisances, but objects for absorbing study. Teachers should preserve a record of their observations, such as natural notions expressed incidentally and spontaneously by children about God, Christ, future life, moral responsibility, etc., etc., and make notes of the effect of a certain kind of religious instruction upon children of certain ages, of what satisfied the child's needs at each stage, and what effect this had upon succeeding stages. Notes on hundreds of similiar subjects, collected by thousands in Sunday schools all over the land, carefully compiled, compared and digested, would give the basis for a study of children's religious nature and development which is now impossible. With a collection of these logbooks of our little crafts of humanity, it might be possible for some Maury to plot for us the direction of currents in the human soul, and enable us to guide our spiritual crafts ever into the safest and surest course.

Objections. To all these plans for education and training of teachers, there are serious objections. It may tend to make the entire work mechanical. The average teacher, instead of depending upon himself and making a spontaneous effort to develop a method suited to his ability, will copy the model teachers, attempt to follow methods not understood, lose all life, individuality, spontaneity,

and his work degenerate into a spiritless routine. Certainly there is danger of this---a great danger. No method can succeed without a fervent spirit. All helps may be so given as to put an end to self-reliance and original work, and certainly the self-reliance, the labor put into the work, measures, or rather generates the spirit, and conditions success. Even the introduction of the catechisms after the Reformation soon led the people into routine and mechanical work. The International Lesson system and all the many valuable helps to Bible study recently devised, in many cases, put an end to all originality and all individual effort. The dictum of the book is taken and accounted sufficient. If it is not in the book, then it is not looked for farther.

Just so the recent revival in pedagogical study; the wonderful zeal shown in pursuit of methods of teaching, of discipline and of management for our public schools has brought in its wake a train of shallow-brained, superficial, normal school method teachers, who worship rules and methods they do not understand, and trim, train, methodize and systematize all life, all power out of teaching. Yet, in spite of all these facts, one must see that the teaching of the Reformation was not all mechanical. The catechetical schools were an advance on the abominations of the Middle Ages. The present systems of lessons and helps are far better than the old practice of merely committing to memory whole chapters of the Bible. The present system of public schools is far in advance of the older ones, in spite of, or in part by means of, the normal school graduates. Not all trained people are machines or weaklings, and while the weaklings are a seeding up or excrescence that will surely come with this plan, they are not at all peculiar to it, but, like the poor, are always with us under any plan.

Whenever opportunities for improvement are given, there comes the further necessity of seeing that they are used to develop and not to weaken; but if these opportunities are not given, we can never grow stronger and shall enter upon a period of progressive senescence.

In Conclusion. After careful study of this problem the following conclusions seem inevitable: First, if the purpose of institutional Christianity is to direct the development of the religious natures of men and to lead them Godward, then it is imperative that the greatest effort be made at that period when the human development is most rapid, or in childhood and youth; and it is folly to put such disproportionate amount of effort upon adults, or at that period when development is slowest and well nigh completed.

Second, a large part of this training can not be done outside the Sunday school; for, if left to the home, only the children of those already religious and cultured would receive any instruction. Only such an institution as the Sunday school can extend the combined influence of good homes to each other and to those less favored; can satisfy that human instinct which has made man a social animal, furnish opportunity for the development of that side of our nature which can be exercised and cultivated only by coming into contact and by working in union with our fellow human beings; and, lastly, can prepare men and women to work in institutional Christianity.

If there is this real sphere, or use, for the Sunday school, and if our religious nature has its laws of development, as do the physical and mental, then how the Sunday school can best do this work is a central problem of pedagogy, and demands the immediate and thorough study of all students of education.

In presenting this preliminary sketch, the writer is more conscious than perhaps anyone else can be of its extreme crudeness

and incompleteness. For the solution of many problems in this field, the methods and data of science are as yet entirely inadequate. There is, however, a vast field ripe for the harvest, and, as the writer will be unable for some time to give a more complete paper, he presents these thoughts in order to suggest the problem, and to submit the idea of genetic training to the critical judgment of scientific thought, in order that its crudities may be cleared away and its real worth shown.

I desire to express my thanks and acknowledge my indebtedness to all the Sunday school superintendents and teachers who have so cordially aided me, for without this aid the work would have been impossible. Dr. W. H. Burnham has been of great service to me and specially aided in reducing the vast mass of material down to a magazine article. The work was undertaken under the direction of President Hall, whose suggestions have been all along of great benefit to me, and for whatever there may be new in these ideas the credit is very largely due to him.

IV.

BIBLIOGRAPHY.

The limits of a magazine article will not allow anything like a complete bibliography. First are given the best works the writer has found that are suited for a normal class or teachers' library.

Second, a few other text-books and works of general interest for the Sunday school worker. To give all these would require a volume. The Unitarian and Roman Catholic books are given more fully, as they are less known:—

The Model Sunday School. Geo. M. Boynton, D. D. 175 pp. Congregational Sunday School & Publishing Society, Boston, 1892. Price, 75 cents.

Contains many valuable practical suggestions gained from experience or reading Will be of use to a new teacher. Contains nothing distinctly new.

How to Teach the Bible. J. M. Gregory. 96 pp. American Baptist Publication Society, Philadelphia. Paper; price, 15 cents.

The better thoughts of this are in the "Seven Laws of Teaching." Many useful but common-place practical suggestions are given with regard to preparing lessons, teaching, managing classes, etc.

The Seven Laws of Teaching. John M. Gregory, LL. D. 144 pp. Congregational Sunday School & Publishing Society, Boston, 1886. Price, 65 cents.

Eight chapters, viz.: "The Laws of Teaching," "The Law of the Teacher," "The Law of the Learner," "The Law of the Language," "The Law of the Lesson," "The Law of the Teaching Process," "The Law of the Learning Process," "The Law of Review." The book is mechanically divided, many principles are not treated, and the latest work in pedagogy is not made use of. The many useful scientific principles brought out are needlessly obscured by the introduction of too much philosophy, moralizing and even metaphysics. Yet it presents many of the best known pedagogical principles, and fills a place that no other Sunday school work does. Every teacher should read it.

Revised Normal Lessons. Jesse Lyman Hurlbut, D. D. 111 pp. Hunt & Eaton, New York. Copyright, 1893. Price, cloth, 40 cents; paper, 25 cents.

Four lessons on the Book and its books. Six lessons on the Bible History, six lessons on the Bible Geography, six lessons on the Bible Institutions, six lessons on the Sunday School, six lessons on the Sunday School Teacher, six lessons on the Pupil.

A list of books for reference and further study is given. The work is all in outline, but will prove suggestive. The Bible lessons are rather mechanical. It should be studied by teachers.

Bible Studies for Normal Classes, Assemblies, Bible Students and Sunday School Teachers. A. E. Dunning, D. D. 102 pp. Congregational Sunday School & Publishing Society, Boston, 1886. Price, 25 cents, paper, and 40 cents, cloth.

Contains the two advanced courses of the "Chautauqua Normal Union." and presupposes knowledge of the first three: No. 1, "Eight lessons on the Bible—geography, history, structure, contents and use;" No. 2, "Eight lessons on the principles and methods of teaching;" No. 3, "Four lessons on the Sunday School."

This work consists of "Four lessons on the teachings in the Old Testament, and on the principles and methods of teaching as illustrated in God's revelation of Himself to men," and "Six lessons on the New Testament, treated in a similar manner."

It is necessarily an outline, but gives the best general view yet given of teaching the Bible. Its principles of teaching are broad and very suggestive. It recognizes the process of development in the Bible, and suggests following the order of God's revelation in teaching the child. It is thoroughly orthodox and progressive, and should be studied by every one interested in the Sunday schools or pedagogy.

The Modern Sunday School. John H. Vincent, D. D. 344 pp. Hunt & Eaton, New York, and Cranston & Curtis, Cincinnati. Copyright, 1887. Cloth, price, 90 cents.

Contains the cream of all his work, and is perhaps the most complete practical study we have of the Sunday school work. Every teacher should read it.

Yale Lectures on the Sunday School. The Sunday School, its Origin, Mission, Methods and Auxiliaries. H. Clay Trumbull. John D. Wattles, Philadelphia, 1888, 415 pp. Cloth.

This is composed of the Lyman Beecher Lectures before the Yale Divinity School for 1888, and is the most scholarly treatment yet made of the Sunday school, especially of its origin and development. Every teacher should read it.

Illustrative Notes. A Guide to the Study of the Sunday School Lessons, with Original and Selected Comments, Methods of Teaching, Illustrative Stories, Practical Applications, Notes on Eastern Life, Library References, Maps, Tables, Pictures, Diagrams. Jesse Lyman Hurlbut and Robert Remington Doherty. Hunt & Eaton, New York. Issued yearly. About 400 pp. Cloth.

Very full of suggestions for the teacher of the International System.

Bible Object Lessons and Songs for Little Ones, for the Home and School, with Illustrations and Special Instruction for Mothers and Teachers. Book I, cloth, 155 pp. The Life and Words of Christ. By Lillie E. Affolter and F. E. Belden. Bible Kindergarten & Music Co., Chicago, 1892. Price, in cloth, $2; board covers, $1.50.

Contains 52 lessons: 30 original hymns and songs, written for the lessons; 36 full-page half-tone engravings, with colored plate; 52 pen drawings, showing how to use the kindergarten material when teaching the lessons. This book is based upon the principles that, first, "Little children must be taught:" second, "Objects of some sort must be used in teaching them, as they cannot understand abstract ideas."

To aid farther the apperception of the child, the book is very beautifully illustrated. The children, for instance, have their interest awakened in Christ's purging the temple, not only by the simple story, but by building their little temple and by looking at the famous picture of Christ scourging the money changers. These are good ideas, if well worked out. The series starts with "God's Love," and describes the happy life in Eden and the fall of man. Then it jumps to "The Need of a Saviour" and "The Gospel Narrative," giving among other lessons "A New Heart," "Heavenly Mansions," "Prayer."

Many of these lessons seem badly selected. Little children can probably understand little of the need of a Saviour and heavenly mansions and new hearts, and need subjects better suited to their capacities. This book should, however, be read by every primary teacher.

The Inductive Bible Studies. American Baptist Publication Society, New York.

On quite similar general principles, though differing in some features from the International Lessons.

The Bible Study Union Graded Lesson System. Formerly called the Blakeslee Graded Lesson System. See page 387.

The International Lesson System. See page 385.

"Legion of Honor" Normal Lessons. For the Systematic Study of the Bible and the Sunday School. Elementary, Practical, Condensed. H. M. Hamill, Superintendent of normal work, Illinois State Sunday School Association. In two books, 15c. each, two for 25c.

First book contains twelve New Testament Bible Lessons and twelve Normal Training Lessons. Second book contains twelve Old Testament Bible Lessons and twelve Normal Training Lessons.

The Bible Lesson Pictures furnished by Harris Jones & Company of Providence, R. I., are highly recommended by the Seventh International Sunday School Convention and are in use by many of our most successful primary teachers.

The Manual of Biblical Geography. A Text-book of Bible History for the use of Students and Teachers, containing maps, plans, review, charts and colored diagrams. Illustrated. Leatherette 4to, $2.50. Hunt & Eaton, New York.

Studies in the Four Gospels. Jesse L. Hurlbut, D. D. Hunt & Eaton, New York. Paper, 25 cents. Cloth, flexible, 40 cents.

Supplemental Lessons for the Sunday School. Jesse Lyman Hurlbut, D. D. Hunt & Eaton, New York. Paper, 25 cents; cloth, flexible, 40 cents.

A Sketch of the History of the Apostolic Church. Oliver J. Thatcher, Professor in the University of Chicago. 12 mo, $1.50.

History of Religion. Allan Menzies. Scribner's Sons, New York, 1895.

A Study in Pedagogy for People who are not Professional Teachers. Bishop John H. Vincent. Wilbur B. Ketcham, New York. Copyright 1890. 73 pp.

Essays on Educational Reformers. Robert Herbert Quick. D. Appleton & Co., New York. Price, cloth, $1.50.

The Moral Instruction of Children. Felix Adler. D. Appleton & Co., New York. Price, cloth, $1.50.

In the Child's World. Morning Talks and Stories for Kindergartens, Primary Schools and Homes. Emelie Poulsson. Milton Bradley & Co., Springfield, Mass., 1895.

Nursery Finger Plays. Emelie Poulsson. Milton Bradley & Co., Springfield, Mass.

The Primary Teacher, with Helps and Exercises. Martha Van Marter (ed. Primary Lesson Helps). Hunt & Eaton, New York. 1893.

Practical suggestions on everything in methods of primary work for the Sunday school.

The Sunday School Primary Teacher's Manual. Louise Ordway Tead. Sunday School & Publishing Society, Boston and Chicago, 1890. 82 pp., cloth.

Many suggestions about primary work with forms for opening and closing, selections of mottoes and memory verses, songs, poetry, etc. A list of primary library books is appended.

Children's Meeetings and How to Conduct Them. Lucy J. Rider and Nellie M. Carman. Fleming H. Revell & Co., New York, 1884

Contains lessons, outlines, diagrams, music and helpful suggestions. Introduction by Rev. John H Vincent, D. D.

An Account of the Manners and Customs of the Modern Egyp-

tians. 5th ed. Edward William Lane. Ed. by Edward Stanley Poole. 2 vols. London, 1871. See Vol. I, p. 73-78, for account of oriental schools of to-day.

The Bible. Alvah Hovey, D. D., LL. D. 16 mo, 192 pp. Price, 20 cents, paper. American Baptist Publication Society, New York.

Compayré's History of Pedagogy. Chancellor Payne. 618 pp. Cloth, price $1.75. D. C. Heath & Co., Boston.

Die Pädagogik des israelitischen Volkes, von der Patriarchenzeit bis auf den Talmud. Samuel Marcus, Vienna, 1877.

Tales for Teachers. William Moody. Thomas Whittaker, New York.

A collection of anecdotes, illustrations, legends, etc., for teachers of Sunday schools Good stories illustrating many of the virtues.

Talks to Sunday School Teachers. Joseph Goodwin Terrill. A. W. Hall, Syracuse, N. Y., 1891.

A compilation from rather wide reading.

Teacher and Class. Fleming H. Revell & Co., New York, 1895.

The Westminster Assembly: Its History and Standard. The Baird Lecture for 1882. Alexander F. Mitchell, Philadelphia, 1884.

Catechisms of the Second Reformation, with historical introduction and biographical notices. Alexander F. Mitchell, London, 1886.

Primary Sunday School Exercises. Mrs. E. M. Hoffman. Introduction by Chancellor John H. Vincent, D. D. Phillips & Hunt, New York, 1885.

Valuable material is found in the reports of the various national and international Sunday school conventions, specially in the Report of the Sixth International Convention at Pittsburg, 1890 (218 pp.), and of the Seventh International and World's Second Convention at St. Louis, 1893 (456 pp.). Both 50 cents. W. B. Jacobs, La Salle street, Chicago.

Stories and Pictures from the Life of Jesus. Mr. G. R. Alden, "Pansy." D. Lothrop & Co., Boston, 1887.

A Model Superintendent. A Sketch of the Life, Character and Methods of Work of Henry P. Haven of the International Lesson Committee. H. Clay Trumbull. Jno. D. Wattles Philadelphia, 1880.

The Organization of the Early Christian Churches. Edwin Hatch. Bampton Lectures for 1880, Oxford and Cambridge, 881.

Parables from Nature. Illustrated by Paul De Longpré. Mrs. Alfred Gatty. G. P. Putnam's Sons, New York and London, 1893.

Pictured Truth, a Hand-Book of Black-board Object Lessons. Robert Y. Pierce. Fleming H. Revell Co., New York, Chicago and Toronto.

The Life of Christ. F. W. Farrar. 2 vols. New York, n. d.

The Early Days of Christianity. F. W. Farrar, New York, 1883.

Life and Times of the Rev. John Wesley, M. A., Founder of the Methodists. L. Tyerman. 3 vols. New York, 1872.

The Life of Nicholas Lewis Count Zinzendorf. August Gottlieb Spangenberg. Trans. by Samuel Jackson. London, 1838.

Memoirs of the Life and Correspondence of Mrs. Hannah More. William Roberts. 2 vols. New York, 1835.

The First Fifty Years of the Sunday School. W. H. Watson, London. No date.

The Sunday School Union, its History and Work. With a memorial sketch of the author. By Wm. H. Groser. W. H. Watson, London, 1869.

History of the Christian Church. George Park Fisher, New York, 1887.

Life and Works of Christ. Cunningham Geikie. 2 vols. in one. New York, 1880.

The Apostles, their Lives and Letters. Cunningham Geikie. Vols. I and II. London, 1895.

Life of Luther. Tr. from the German. Julius Köstin. New York, 1883.

Life and Times of Jesus, the Messiah. Alfred Edersheim. 2d ed. 2 vols. New York and London. No date.

Sketches of Jewish Social Life in the Days of Christ. Alfred Edersheim. London. No date.

Plain Use of the Black-board. Rev. W. F. Crafts. Ward & Drummond, New York, 1881. Notes on Illustrative Teaching in the Primary or Infant School, by Mrs. Crafts, is appended.

The Black-board in the Sunday School. Frank Beard. Excelsior Publishing House, New York, 1877.

Shows how to use the black-board in the Sunday school, adding a few suggestions on technique.

Young Teacher. William H. Groser.

Manual of Christian Evidences. George Park Fisher, D. D., LL. D. Flood & Vincent, Meadville, Pa. The Chautauqua Century Press, 1892. 120 pp., cloth, 50 cents.

The Lesson System, the Story of its Origin and Inauguration. Simeon Gilbert. New York, Phillips & Hunt; Cincinnati, Hitchcock & Walden. 96 pp., 1879.

Very interesting.

Robert Raikes, Journalist and Philanthropist. A History of the Origin of Sunday Schools. New York.

The Bible the Sunday School Teacher's Text-Book. Alfred Holburn, Boston, 1885.

A study of the Bible, authenticity, growth, style, methods of instruction, etc., with special reference to the Sunday school.

Ten Complete Sunday School Concerts, with Thirty Additional Concert Pieces, Dialogues and Addresses. Rev. T. C. Reade, A. M. Hunt & Eaton, New York.

The History of Sunday Schools and of Religious Education from the Earliest Times. Lewis G. Pray. Boston, 1847.

"A thesaurus of facts and suggestions."

Children in the Temple. A Hand-book for the Sunday School Concert and a Guide for the Children's Preacher. H. Clay Trumbull. Springfield, 1869.

The Sunday School Teacher's Work and the Other Work of the Sunday School Teacher. H. Clay Trumbull. Jno. D. Wattles & Co., Philadelphia, 1893.

Many books of value, specially German works, are sold by the American Tract Society, New York.

The Sunday School Institute (Church of England), Serjeant's Inn,

Fleet street, London, and the Sunday School Union, 56 Old Bailey, London, have published many works of interest and value for Sunday school workers.

UNITARIAN TEXT-BOOKS. Published by the Unitarian Sunday School Society, Boston, unless otherwise specified.

Unitarian Catechism. M. J. Savage. Boston, 1891.

An attempt to give in catechetical form the philosophical and religious beliefs of the Unitarians. Simple, clear and scientific. Suited to explain the faith to adult inquirers.

Religions Before Christianity. C. C. Everett.

The essence of each great religion is stated by question and answer, and Christianity shown to crown them all. Suggestive. Too advanced for children. Too dogmatic for older people. Contains a very valuable list of books for reference.

Manual of Unitarian Belief. James Freeman Clarke. 1893.

Good to stimulate discussion in an adult class.

Noble Lives and Noble Deeds. Edward A. Horton.

Forty virtues are chosen and a Scripture text given, with a few biographical incidents of noted men illustrating each. Questions and suggestions to teachers are added. Excellent idea.

The Citizen and the Neighbor. Charles F. Dole. 1884.

First Lessons on the Bible. E. H. Hall. 1895.

First gives account of life in Palestine, then follow the Bible characters down to Jesus. Each lesson has questions and notes explaining these, with added references to other sources of information.

A Life of Jesus for Young People. Illustrated. Howard N. Brown. Boston, Estes & Lauriat.

Lessons on the Life of St. Paul. Drawn from the Acts and the Epistles. Edward H. Hall. 1894.

Lessons in Religion. Charles A. Allen. 1892. "Based on the interpretation of religion and of Christianity that is presented in the writings of Dr. James Martineau."

Philosophical Discussion. Contains reference to standard works for advanced study. For adult students.

Little Thoughts Made Larger. By Lizzie C. Estey and Clara K. Daly.

Cards to be given children, and book of stories and poetical selections for use of teacher in illustration.

Little Duties of Little Citizens. By Mrs. Kate Gannett Wells.

Various duties illustrated by cards and poetical selections.

Sunday Helps for Little People. By Alice C. Dockham and Lucy F. Gerrish.

Thirty eight beautiful engravings, illustrating various virtues. To be given and accompanied with mottoes and stories. The mottoes for each are given in a little book.

Lessons on the Life of Jesus. Mrs. J. C. Jaynes.

Thirty-six leaflets, treating of the every-day life of Christ, and dwelling on His beautiful humanity. Each lesson has an excellent picture illustrative of the text. The style of writing is as admirably adapted to very small children as the Unitarian doctrine could allow,—the author going so far, occasionally, as to give the beautiful Scripture stories in all their naïvety, without attempting a philosophical explanation.

Lessons on the Old Testament. Mrs. J. C. Jaynes.

Same style as above. The stories are told powerfully as myths, with applications made to every-day life.

Life of Jesus. Second Year Intermediate. Thirty-one sheets.

A text is given with some poetic quotation.

Lesson one treats of Birth of Jesus, and is divided into "The Narrative," "The Sources," "The Facts," "A Look Backward," "Class Talks," "Lesson Topics and Review," "Suggestions to Teachers" and "References."

Second Year Advanced: "What are the Gospels?" "Jesus, the Son of Joseph and Mary," "The Birthplace of Jesus," "The Stories of the Birth," "Lesson Hints," "Questions, Notes."

These are rather dry, almost pedantic. A bright teacher might find them useful and suggestive for an advanced class.

Sunday Stories. H. N. Brown.

Sixteen stories for young people. Rather mature. Would form good basis for verbal stories illustrating various virtues.

Parables Illustrated by Pictures and Stories.

Each picture is on cardboard, with a Scriptural text and parable below. The practical application is shown in a poetical selection following.

The idea and execution are both good.

A Scheme of Graded Courses of Study for Sunday Schools. 1891.

An attempt to outline a progressive course in ethics and religion, beginning with the child of five years old and extending over twelve years. What text and reference books to use each year, and about what to teach is suggested from the Unitarian standpoint.

Quarterly Lessons of Forty Hymns. Rev. Henry G. Spaulding.

Each of forty of our noted hymns is printed upon cardboard. A pamphlet accompanies these, giving one lesson to each hymn, treating of its authorship, origin and teachings, and giving references to illustrative Scriptural and secular readings. A short life of the author of the hymn is appended, with literary criticism of his work. The study of these may be confined to the hymnody, or the hymns may be used as the poetic expression of certain religious truths, which are made topics of study. Very interesting study for advanced pupils.

Every-Day Life. Illustrated by the Life of Jesus. With Pictures by the Masters, and Original Stories. Mrs C. E. Wilson. 1894.

Lessons in Ethics, or the Laws of Right Conduct. Part I. Rights and Duties. Kate Gannett Wells.

Part II. Character Lessons. George H. Young.

A great number of pamphlets on various books of the Bible, the Heroes of Israel and the Teachings and Works of Christ are also used by Unitarians.

Childhood's Morning. For Kindergarten Use in Sunday School and Home. Elizabeth C. Mumford. 60 pp. 1895.

Various parts of the body are taken up; short Scripture texts are given, and a lesson suited to children follows. The stories of the Bible are used to interest and teach little lessons. Flowers and festal days are treated in the same way. Very well done and suggestive. Should be read by all primary teachers.

History of the Religions of Israel. Crawford H. Toy. 1894.

Outline of Christian History. Joseph Henry Allen. Roberts Bros., Boston, 1892.

Roman Catholic Sunday School Text and Reference Books.

The Little Catechism, or Short Abridgment of the Catechism of Christian Doctrine. Approved by the Cardinal Archbishop and Bishops of England and Wales. Catholic Publication Soc. Co., New York. Paper, 32 pp.

Catechism for First Confession. St. Paul's Sunday School, W. 59th street, New York. Paper, 32 pp.

A Catechism of Christian Doctrine. Abridged from the Catechism prepared and enjoined by order of the Third Plenary

Council of Baltimore. Published by ecclesiastical authority. A favorite standard for first communion. Catholic Publication Soc. Co., New York. Paper, 36 pp.

A Catechism of Christian Doctrine Prepared and Enjoined by the Third Plenary Council of Baltimore. Published by ecclesiastical authority. Benziger Bros., printers to the Holy Apostolic See, New York, Cincinnati, Chicago. Copyright 1885. Paper, 72 pp. Boards and illustrated, 88 pp.

Deharbe's Catechism No. 2. A Catechism of the Catholic Religion. Translated from the German of the Rev. Joseph Deharbe, S. J. Preceded by a short history of religion. Edited by the Right Rev. P. N. Lynch, D. D., Bishop of Charleston. Catholic School Book Co., New York. Copyright 1878. Boards, 177 pp.

Questions and Objections Concerning Catholic Doctrine and Practices. Answered by John Joseph Lynch, Archbishop of Toronto. The Pilot Publishing Co., Boston. Paper, 76 pp.

The Authorized Catechism of Christian Doctrine, with Explanatory Notes. Very Rev. William Byrne, D. D. Flynn & Mahony, Boston, 1894. Paper, 96 pp.

Sunday School Manual. Pictorial Prayer Book, with Hymns Specially Prepared for Scholars in Catholic Schools. Imprimatur: Michael Augustine, Archbishop of New York. The Catholic Publication Soc. Co., New York, 1893. Cloth, 175 pp.

An Abridgment of the Christian Doctrine, with Proofs of Scripture on Points Controverted, by way of Question and Answer. Composed 1649 by Rev. Henry Tuberville, D. D. Known in England and Ireland now as Butler's Catechism, and in most general use. Considered rather difficult in America. 151 pp. E. Dunnigan & Bro., New York.

The Catholic Christian Instructed in the Sacraments, Sacrifices, Ceremonies and Observances of the Church, by way of Question and Answer. By the Most Rev. Dr. Challoner. Companion to the Butler Catechism; was in very general use in England, Ireland and America a generation ago. Now used only by adults. 205 pp. Benziger Bros., New York.

A Companion to the Catechism Designed Chiefly for the Use of Young Catechists and Heads of Families. 360 pp. W. H. Gill & Son, Dublin, 1887.

This work takes each paragraph of the catechism and arranges alongside all the Bible texts that can be brought to its support.

The Catechism Illustrated by Passages from the Holy Scripture, with an Appendix and Notes. Compiled by the Very Rev. Jno. B. Bagshawe. 176 pp. Patrick Donahue, Boston, 1871.

Not so complete as the one next above.

Hand-book of the Christian Religion for the Use of Advanced Students and the Educated Laity. Rev. W. Wilmers, S. J. From the German. Benziger Bros., New York, 1891.

Most advanced and most philosophical work on the subject.

An Explanation of the Baltimore Catechism of Christian Doctrine for the Use of Sunday School Teachers and Advanced Classes. Rev. Thos L. Kinkead. 393 pp. Benziger Bros.

Gives Bible references and also explanations of value to teachers using the Baltimore Catechism.

Catechism of Perseverance. Translated from the French of Abbe Gaume by Rev. F. B. Jamison. Thos. B. Noonan & Co., Boston.

This is an abbreviation of the large French Catechism.

Faunder's Catechism of Christian Religion. Translated by the Very Rev. Geo. Porter. Burnes & Oates, London, and Benziger Bros., New York.

Abridged Course of Religious Instruction, Apologetic, Dogmatic and Moral; for Use of Catholic Schools and Colleges. Rev. X. F. Schouppe. 405 pp. Burnes & Oates, London, 1889.

Used for college and academic study in America and England.

First Communicant's Manual. Rev. X. F. Schouppe. Translated by M. A. Grosier. 48 pp. Burnes & Oates, London, 1881.

Manual of Instruction in Christian Doctrine. The Very Rev. Canon Wenham. Burnes & Oates, London, and Benziger Bros., New York.

In six standards, and used in parochial schools in England.

The Catholic Pupil Teacher. Religious Instruction, Diocese of Liverpool. Very Rev. Canon Carr, Diocesan Inspector. 108 pp. Burnes & Oates, London, 1880.

Published in four standards in four different grades.

Catechism: Doctrinal, Moral, Historical and Liturgical, with Answers to the Objections Drawn from the Sciences Against Religion. 558 pp. James Duffy & Sons, Dublin, 1880.

Catechism Made Easy, Being a Familiar Explanation of the Catechism of Christian Doctrine. Rev. Henry Gibson. Rockliff Bros., Liverpool, 1845. In three volumes.

A Catechism of Christian Doctrine Prepared and Enjoined by Order of the Third Plenary Council of Baltimore. For the Use of Catholics in the United States of America. Published by ecclesiastical authority. No. 2. New Edition with Word-meanings at the Head of Each Chapter. 79 pp. John Murphy & Co., Baltimore, 1894.

The Explanatory Catechism of Christian Doctrine for the Use of Children in Catholic Schools of the United States, with an Appendix. 102 pp. John A. Boyle, Boston. Flexible cloth.

This book is in great use among the Irish in America. The catechism is similar in general to the others. The appendix of twenty-six pages explains "A Short Form of Morning Prayers," "A Short Form of Night Prayers," "De Profundis," "Salve Regina," "The Angelus," "The Divine Praises," "Chief Heresies," "Councils." "Principal Feasts," "Vestments, etc.," "The Hierarchy," "Principal Devotions," "Sacramentals and Ceremonies," "The Gifts of the Holy Ghost," "The Holy Scriptures and Tradition," "Form of Confession."

M. Müller's Series. Catechism of Christian Doctrine for Parochial and Sunday Schools. Kreutzer Bros., Baltimore, 1878. Now Benziger Bros.

Used by Germans in America. In three grades.

Fleury's Short Historical Catechism, containing a Summary of the Sacred History and Christian Doctrine. Translated from the French by Eugene Cummiske.

Not much used in America.

Le Petit Catéchisme de Québec. Publié avec l'Approbation et par l'Ordre du Premier Concile Provincial de Québec. 144 pp. Thos. Noonan & Co., Boston.

Used in Canada and by French Catholics in the United States.

The Meanings of the Words of the Catechism. Burnes & Oates. Paper, 63 pp.

The Catechist's Guide. By Marin de Boylesve, S. J. Published with approbation of Bishop of Newark, N. J., 1892. Press of A. Datz. Paper, 43 pp.

Catechetical Instructions on the Doctrines and Worship of the Catholic Church. By John Lingard, D. D. London Catholic Pub. & Bookselling Co. Cloth, 123 pp.

The Rev. S. Keenan's Controversial Catechism or Protestantism refuted and Catholicism established by an appeal to Holy Scriptures, the testimony of the Holy Fathers and the dictates of reason,—in which such portions of Scheffmacher's Catechism as suit Modern Controversy are embodied. 12mo. Catholic Pub. & Bookselling Co., London.

Catechism. Rev. J. Perry. Catholic Pub. & Bookselling Co.

How to Teach at Catechism, No. I. By the Rev. J. Furniss, C. S. S. R. James Duffy, Dublin, 1863. Cloth, 32 pp.

No. II. Companion to How to Teach at Catechism. Cloth, 32 pp. Two bound in one.

Sincere Christian Instruction in the Faith of Christians from the Written Word. The Right Rev. Dr. Geo. B. Hay. Thos. B. Noonan, Boston, 1885.

Devout Christian. Same author and publisher as the one above.

The Children's Companion to Christian Doctrine and Bible History for School and Home Use. Burnes & Oates, London, 1889. Paper, 72 pp.

Familiar Explanation of Christian Doctrine. Adapted for the Family and more Advanced Students in Catholic Schools and Colleges. No. 3. Rev. M. Müller's C. S. S. R. series. Cloth. 496 pp. Kreutzer Bros., Baltimore, Md., 1875.

God the Teacher of Mankind. A Plain, Comprehensive Explanation of Christian Doctrine. The Church and Her Enemies. Rev. M. Müller, C. S. S. R. Cloth. Benziger Bros.

Short and Familiar Answers to the Most Common Objections Urged against Religion. From the French of L'Abbé de Segur, formerly Chaplain of the Military Prisons of France. Paper, 32 pp. P. O'Shea, New York, 1885.

A Primer for Converts, Showing the Reasonable Service of Catholics. By Rev. John T. Durward, Rural Dean, Baraboo, Wis. Benziger Bros., 1892. Cloth, 175 pp.

Short Stories on Christian Doctrine. A Collection of Examples, Illustrating the Catechism. Translated from the French by Miss Mary McMahon. With six full-page illustrations. Benziger Bros., 1884. 224 pp. in cloth.

This follows Deharbe's catechism in the order of its stories. In French it is known as *Catéchisme en Histoires.*

The Faith of Our Fathers. Being a Plain Exposition and Vindication of the Church founded by our Lord Jesus Christ. Cardinal Gibbons. Cloth or paper; 480 pp. John Murphy & Co., Baltimore, 1889.

True Faith of Our Forefathers. By a Professor of Theology in Woodstock College. S. J. Maryland. American News Co., New York. Cloth, 571 pp.

The Catechism, an Aid to the Intelligent Knowledge of the Catechism. Rev. J. G. Wenham, Canon of Southwark and Diocesan Inspector of Schools, London. Burnes & Oates, London. Cloth.

Catholic Belief, or a Short and Simple Exposition of Catholic Doctrine. By the Very Rev. Joseph Faà Di Bruno, D. D., Rector General of the Pious Society of Missions.

Author's American Edition. Edited by Rev. Louis A. Lambert, Author of Notes on Ingersoll. Benziger Bros. 433 pp., cloth and paper, 1884. Cheap editions, 15 and 20 cents.

The Grounds of the Catholic Doctrine Contained in the Profession of Faith. Published by Pope Pius IV. By Way of Question and Answer, to which are added Reasons Why a Roman Catholic cannot Conform to the Protestant Religion. Thomas B. Noonan & Co., Boston. Cloth, 96 pp.

A Sure Way to Find out the True Religion, in a Conversation between a Father and His Son. By Rev. T. Braddeley. Thomas B. Noonan & Co., Boston. Cloth, 126 pp.

Chats about the Commandments. A Book for Girls. Published by R. Washbourne, London, 1880. Cloth, 234 pp.

Catholic Anecdotes. By Mrs. James Sadlier. 3 vols. Illustrating Christian Doctrine.

New Testament Study. Edited by Rev. Thomas J. Conaty, D. D. 162 pp. The Catholic School and Home Magazine, Worcester, Mass., 1895. Paper, 15 cents.

This is the first definite attempt yet made by Roman Catholics to study the Bible by a plan that is not far from being a combination of the old catechism with the International Lesson method. This is sold for schools in leaflet form.

The Ministry of Catechising. By Monseigneur Dupouloup, Bishop of Orleans, Member of the French Academy. Translated into English by E. A. Ellacombe. 612 pp. Benziger Bros., N. Y.

Catechism of the Council of Trent. Published by the command of Pope Pius V. Lucas Bros., Baltimore.

This is, of course, the father of catechisms.

Méthode de Saint-Sulpice, dans la direction des catéchismes, avec des plans d'instruction pour les divers catéchismes. 3d ed. Paris and Lyons, 1874. "Treats of history, literature and methods of the subject quite fully from a Roman Catholic standpoint."

Explication historique, dogmatique, morale, liturgique et canonique du catéchisme, avec la réponse aux objections tirées des sciences contre la religion. Par L'Abbé Ambroise Guillois. H. Casterman, Journal, 1868.

Nouvelle explication du catéchisme de Rodéz. Par M. Noel, Paris, 1867. 6 vols., 520 pp. each. Traité de la prédication a l'usage des séminaires. Par M. L. Curie de Saint-Sulpice, Paris.

The second part of this is devoted to the subject of catechetical instruction.

MISCELLANEOUS.

Questions and Answers on the Book of Mormon. By A. H. Cannon. Published at the Juvenile Instructor office, Salt Lake City, 1886.

Dogmatic catechism about Mormon prophets, etc., of no apparant value. Quite similar in style to old ones on the Bible.

Deseret Sunday School Catechism. No. 1. Questions and Answers on the Life and Mission of the Prophet, Joseph Smith. Published by the Deseret S. S. Union, Juvenile Instructor office, Salt Lake City, 1882.

Just what the title gives. No apparent religious value.

A Guide to Namaz. A Detailed Exposition of the Moslem Order of Ablutions and Prayer, with a Review of the Five Pillars of Practice. Mohammed Alexander Russell Webb. The Moslem World Publishing Co., Ulster Park, Ulster Co., N. Y. Paper, 27 pp. Price, 15 cents.

A very valuable bibliography of the history of the Sunday school may be found at the end of "Yale Lectures," by H. C. Trumbull.

CHARACTERISTICS OF THE BEST TEACHER AS RECOGNIZED BY CHILDREN.

By H. E. Kratz.

There have been numerous pedagogical works written in which the characteristics of the best, or model, teacher have been set forth, but usually from the standpoint of some eminent educator. In describing that model teacher, the eminent educator draws largely from his own experience, and clothes his model with his own characteristics, supplemented, it may be, by some traits observed in other successful teachers, and rounded out by a few more, evolved from his inner consciousness.

Without wishing to decry the helpfulness of such descriptions, it may be well to depart from this customary view, and glean some of the characteristics of the best teacher from the standpoint of the pupil. While the judgment of the pupil, no doubt, is immature and liable to error, yet those characteristics which impress the pupils favorably, which lead to a high appreciation on their part, and establish those relations of sympathy and coöperation so essential in the school room, must have some value. In these days of child study, why should not these characteristics be investigated, and some ideas gained of the best teacher from the children's standpoint?

Believing that there might be some useful information gained from such an investigation, probably only confirmatory to the views held by the eminent educators, but, in any event, helpful to the teachers making the investigation, we, with the hearty coöperation of the Sioux City teachers, undertook the work after the following plan:

Child Study, No. 4.

Purpose, to learn something of the children's ideas as to what constitutes the most helpful teacher, and what are the chief characteristics of the best teacher.

Preliminary and first grade pupils are not to be included in this study.

Provide pupils with paper and pencil, and request each to write at top of sheet name of school building, his name, age and grade.

Place on the blackboard the following questions, and request pupils to express themselves clearly and fully:

Recall all your teachers as fully as you can, and single out the one who helped you the most.

Question 1. In what way did she help you?

Question 2. Do you recall any special word or act of hers which greatly helped you? If so, what is it?

Question 3. Will you write, in a half dozen sentences, a description of the best teacher you have had without naming her?

Teachers were instructed to carefully examine the replies before sending them to the superintendent's office, so that they might learn what characteristics their children most appreciated.

2,411 papers, from second to eighth grade inclusive, were collated in the superintendent's office, and proved a most interesting study. For convenience, a few of the more common replies, as to how pupils were helped, and in reference to the best teacher's characteristics, are presented in tabular form:

Grades.	No.	Helped in Studies.	Personal Appearance of Teacher.	Good or Kind.	Patient.	Polite.	Neat.	Cross.
Second	404	all	59%	53%	2%	2%	2%	1%
Third	581	all	57%	52%	4%	5%	8%	2%
Fourth	511	95%	68%	63%	9%	5%	11%	2%
Fifth	347	85%	50%	67%	16%	7%	6%	3%
Sixth	245	55%	41%	55%	14%	7%	4%	5%
Seventh	157	40%	74%	45%	14%	2%	9%	2%
Eighth	166	39%	64%	38%	22%	3%	11%	0
Total,	2411		58%	55%	9%	7%	4%	2%

In reply to the question, "In what way did she help you?" all the lower grades mentioned some particular study or studies, but other and more important matters were mentioned in the higher grades.

In the lower grades, such expressions as "She helped me to be good," "to study," "to like school," "to be polite," "not to whisper," "to be kind," "not to swear, chew nor smoke," were generally given, while in the higher grades, such replies as "to observe," "to control myself," "to cure myself of some of my bad habits," "to strengthen my character," were characteristic.

A careful study of these replies suggests the thought that pupils are generally more appreciative of the earnest, intelli-

gent efforts of their teachers to train and develop them, especially along the line of character building, than is commonly supposed, and that this sense of appreciation, while it is often concealed beneath a careless or impassive exterior, has been aroused and will intensify as the years come and go.

In response to the question, "Do you recall any special word or act of hers which greatly helped you?" the lower grades made frequent references to some word of commendation or praise, which had been an inspiration to them, such as, "She said I was a good writer," "a good speller," "Your work looks neat," "By telling me I improved in my lessons," etc.

The deep sense of appreciation of words of encouragement and commendation was not entirely confined to the lower grades, but manifested itself to a greater degree than anticipated in the higher grades. If the simple statement of the teacher, "Your work looks neat," when such statement harmonized with the facts, so greatly inspired and helped a pupil that he remembered it several years afterward, may it not be wise for teachers to be on the lookout for such occasions and utilize them more frequently? Teachers, in their constant watch for errors, imbibe too much of the criticising spirit, and sometimes fail to recognize that it is also their duty to commend excellence, and thus give needed inspiration.

From among the many interesting statements which were recalled as highly helpful, only a few can be quoted at random. This was a favorite quotation, "If at first you don't succeed, try, try again." "Honesty is the best policy" and "Attention to duty is the secret of success," were also given as helpful in shaping their lives.

To lodge such energizing sentiments in the memories of pupils and make them moulding, stimulating forces in their lives is a rare privilege, and carries with it much responsibility.

The most helpful words of the teacher which were remembered and appreciated, were very frequently along the line of self-help, as, "If you find out for yourself, you will not forget so soon," "I cannot help you unless you help yourself," "Never say I can't, but do the best you can."

Numerous references were made to statements in which the teacher placed confidence in pupils, and they were delighted to respond, as, "She sometimes left the room to see if she could trust us, and we were always honest, and did not do anything behind her back."

Here is a splendid tribute to a genuine teacher who could impress her noble spirit upon her pupils: "When you did

anything wrong, she would take you aside and explain that you had done wrong, and it would make anybody try to be good when you had a little talk with her."

So many pupils referred to little attentions given them, a smile, a pleasant word, tying a ribbon, recognition on the street, a visit, etc., that it was clear that this was a royal way into their affections.

In describing the "best teacher," it was a matter of surprise at first, that in every grade, except one, more than half of them gave prominence to her dress and personal appearance. Had this occurred only in the lowest grades, it would readily be attributed to the propensity of the child to note and judge only superficial qualities; but when her highest grades gave dress and personal appearance even greater prominence, it raised the question whether it was not, after all, a highly important factor in school work. That children are highly susceptible to such impressions of taste and neatness, and that they quickly imitate and improve under such influences, is well known and constantly utilized, but is the other consideration, that teachers should dress with neatness and taste in order to attract and win their pupils, given due weight? Ought not the teacher to consider this matter of dress and general personal appearance in the light of a professional duty, if from no other, because it gives her additional power to cultivate those pleasant relations of sympathy and affection which are so essential to school-room work?

Patience, always needed in training the young, received quite a high degree of appreciation. As would be inferred, this appreciation manifested itself least in the lowest grades, and very rapidly increased in the highest grades.

Politeness was another characteristic frequently referred to. Many statements indicated how responsive pupils generally are to courteous treatment, and how resentful to discourteous treatment.

Neatness was another trait many recalled. Not only was the dress of the teacher referred to, but also her desk. Teachers need to remember that dress, desk, blackboards, the entire room, all are making lasting impressions, and must not be ignored.

It was a little amusing to find that a few pupils commended crossness. That this may not be a little crumb of comfort to that rapidly disappearing class of teachers whose chief reliance is in scolding, it must be stated that in nearly every one of these cases there was internal evidence that the pupil thought a tongue-lashing was doing penance for mis conduct, and in no sense regenerative.

On the other hand, the numerous references to the pleasant, mild, good-natured, not cross, not cranky, happy, lovely, agreeable, friendly, loving, patient, cheerful, smiling, sweet-tempered, full of fun, merry, not snappy, gentle, always in good humor, amiable, jolly teacher, would convince the most sceptical scold that scolding is neither a regenerative process nor a passport into the affections and good will of a pupil.

The following characteristic statements about the "best teacher" are highly suggestive and need no comment:

"She could stand some fun."

"She had no pets."

"The children feel as if she was one of them."

"The principal reason I liked her for was because she liked me and showed it once in a while."

"She always got our attention."

"She always wanted me to be thoughtful."

"Her actions helped me to do better."

"If you did not get your lessons, she was so sorry that it made you ashamed."

"She don't feel satisfied when her pupils don't have a good lesson."

"She took a great deal of interest in us."

"She was interested in her pupils' habits and readings."

"Put us on our honor."

"By making things pleasant, so I felt like working."

"Her manner seemed to give me an inspiration to work."

"She never punished the pupils because she didn't feel good."

"Does not scold us one time and then be awful good for a while."

"Never flew off the handle."

"Always meant what she said."

"Always thought before she spoke."

What better description, in the prescribed half dozen sentences, could be given of the best teacher than the one so tersely stated by a six-year-old, "I just love her."

The following is a description by a sixth grade pupil:

"I had a lovely teacher. She was kind, thoughtful and gentle, and helped you whenever she thought you needed it, if you asked her politely. She had a large heart, although she was small, and a good deal larger heart than some people twice her size."

Another sixth grade pupil wrote:

"She always tried to make the room look neat, and tried to make it as pleasant as possible. When I first started I could not bear language, and now I think it is one of the best studies. She was very reasonable. I always hated to go to

school, but when I came in that room I was not out one day in the whole year. Every pupil in the room knew by her actions what she wanted us to do."

The following description is from an eighth grade pupil:

"The best teacher I ever had was kind and gentle, and had a beautiful character, but was not at all 'soft.' She could change her disposition at a moment's notice if circumstances required it. But not quite strict enough. She acted on her pupils' honor, and, therefore, procured better results than, I think, if she had kept her eye on them all the time. And one good thing about her was that she did not make any 'foolish,' 'silly' rules that were unnecessary, but the ones she made, the children most always lived up to."

HOW TO COLLECT DATA FOR STUDIES IN GENETIC PSYCHOLOGY.

LILLIE A. WILLIAMS,
New Jersey State Normal School.

In a course of psychology for those who are to be teachers, the genetic must, it seems to me, be the chief concern. Moreover, what they need is not so much metaphysical speculation concerning the laws of the development of the child's mind, as such a knowledge of the facts as can be reached through the study of children. At the beginning of their course in psychology, my pupils are started in the work of child study by the method of general observation, originated by Principal Russell of the Worcester State Normal School, and so admirably set forth by him in former numbers of the PEDAGOGICAL SEMINARY that I need say nothing further in explanation.

This work never fails to arouse in them an interest in children, and gets them into a right attitude of mind toward their life work. I now, in addition, take up with my classes Dr. Hall's syllabi, and through them, I think, succeed in giving a force and directness in observation which I had not before secured.

As, from the start, the material stored up in the school collection is used illustratively in the work in psychology, the students soon have a realizing sense of the need for such matter in advancing science. It is to this thought that I appeal in first presenting a syllabus to a class. I remind them that every natural science must begin with the accumulation of facts, of the vast mountains of facts necessary in order that generalizations of any value may be reached. I show that the material can be obtained only through the coöperation of very many different observers, each contributing his mite to swell the whole, and that in this work each one of them may bear a part. I touch upon the honor of being co-laborers even in ever so small a way with the eminent scientist who is directing the research.

We then pass on to the consideration of the particular syllabus. Let us take for the purpose of illustration "Fears,"

as that proved to be one of very great interest. I introduce the subject by a little preliminary talk about fear, its universality, its painful character, the frequent appeal to it in the school-room. I pass on to our lack of definite knowledge about it and of the need for more light. I point out that one great obstacle to getting at the facts is that children do not tell their fears, in many cases, even to those whom they love best; but that when one has passed from childhood to adolescence and looks back upon childish fears, the shrinking in speaking of them has usually passed away. If young men and women would speak freely of their early fears, we should have here the best source from which to gain the needed information. I thus seek to emphasize the value of reminiscences.

Having excited their interest and aroused their attention, I begin dictating the syllabus. I could have the whole thing written out on the slate beforehand, and now simply ask the pupils to copy, which could be very quickly done; or a still more expeditious method would be to place in the hands of each a hectographed copy. But my object is not to gain time; it is to produce as strong an impression on the mind as I can. Now I find that it is one thing to pick up a paper and read, 1. "Fears of celestial phenomena, as, *e. g.*, of winds, etc.," and quite another to hear a living voice say, "When you were children, were any of you afraid of the wind?" First impressions are very powerful, and a syllabus dwelt upon point by point in the slow process of dictation, lies in the mind in a very different way from one which is simply copied or read.

In the effort to recover from memory what lies well back in the past, the great difficulty is in arousing associations. To ask a person in a general way, "What were you afraid of as a child?" is to fail to get anything but a very general response. A strong point of the syllabus under discussion is that it is so very specific. The mind is made to pass in review the objects of fear, which, so far as is known, are most common among children. But even this will not always be enough. I have found it profitable to dwell more particularly on each point. Thus, on the question of fear of cloud-forms, I may ask, "How many of you were afraid of cloud-forms?" Perhaps three or four raise their hands. I then say, "Won't one of you tell us a little about your fear of cloud-forms? What made you afraid? How old were you? What did you use to do? What cured you of it? Do you know any children who are afraid of cloud-forms now?" There is never much waiting for a volunteer, and before the talk has gone far, half of the class are engaged, and recollec-

tions are fairly crowding in upon them. Sometimes a reminiscence of my own chilhood proves the "open sesame" to their before inaccessible impressions. If it was the object of the research to elicit unbiased opinion from each pupil, of course all discussion would be rigorously excluded, but it is reminiscences which are of first value, and the fuller the discussion the greater the likelihood of arousing associations. Listening to stories of fears of the end of the world proved very helpful in my own case. Peculiar sky-colors, fears of the woods and dream-fears were discussed with great profit to the class. In the case of such expressions as "loss of orientation," I find it necessary to define the term as the first step. The question, "Were you afraid of dying?" led one young lady to say, "I was horribly afraid of being buried alive," and this proved to have been a common fear. In connection with the question, "Were you afraid of diseases read of?" an allusion to patent medicine almanacs and other advertisements awakened lively memories of painful fears. Thus, point by point the syllabus was discussed.

The arousing of one's own memories of fears is good preparation for observing the indications of fear in children, and thus in aiming at reminiscences we do better afterwards in the line of first-hand observation than if we had made this our first object.

The arrangement of the matter and the character of the expression must receive some attention. I instruct my pupils to write down first in the rough all that they can recover, and then to make a careful draft later. They are accustomed to noting age, sex and nationality in their records. The order in which early experiences occur is not easy to recall, but I find that it can often be done by working forward to or backward from some well-known landmark in one's past. The age at which the fears disappear seemed to be specially hard to fix.

In some of the syllabi, as the third of the present series, "The Beginning of Reading and Writing," observations on children and specimens of their work are chiefly desired. To quicken interest I show specimens of the sort needed which I may happen to have in my collection. I relate illustrative anecdotes from my own stock of observations, and discuss each requirement carefully with the pupils.

Such phenomena as blushing, hiccough, sighing, second breath, and others treated of in syllabus twelve, should be minutely observed with the questions in mind. In this case after dictating the syllabus and talking it over, I asked the students to study themselves and each other the next time they had any of these experiences.

In securing data for part of "Feeling for Objects of Inanimate Nature," one must go directly to the children. But I found it easy to arouse such an enthusiasm on the subject that a great deal of inconvenience was cheerfully encountered in the effort to secure children, and then so to win their confidence that their answers to questions might have value. The impossibility, in many cases, of getting at children at the right time and under circumstances otherwise favorable, proved a serious obstacle to success here.

While, for the sake of the psychological instruction, the dictating and discussion are for the whole class, and take the place of two or more recitations in psychology, the making of returns is voluntary. Nearly all the students do make returns. Any work thus done requires time, and the writers are given full credit for it in the record of their psychology.

I have thus far spoken of the syllabi as helpful in the study of children; let me, in closing, refer to their value to the teacher in opening up the subject of psychology to Normal classes. In choosing a method of presenting the science to such students, one must consider not only the purpose for which they study it, but the character and extent of their previous education. How to secure apperception is ever the chief problem. We know that we must lead them to introspect, but we do not always know how to give beginners the sort of explicit direction which they need. Here Dr. Hall's carefully prepared syllabi come to our aid. Let us take that on "Anger" as an illustration. The best preparation for a study of this feeling—and this may serve as an introduction to the consideration of feeling in general—is to have the student write out answers to the questions in this syllabus.

The paper on "Moral Education" is admirable for teaching purposes. One wishes to present the subject of the will, to show the little child the creature of his impulses, instincts and feelings, and then to obtain a conception of the long, slow and intricate process by which is evolved the adult will, able to reason to a decision, or higher still, to put forth that "slow dead heave of the will" at the call of hard duty, and strong and tenacious in carrying out the resolve when formed. Success will be reached if the students are led to view the matter in the light of experience, and this may be brought vividly into consciousness if, through answering the questions in this syllabus, they are made to analyze the influence upon themselves and others, of teachers, companions, parents, amusements, recreations, studies, reading, punishments, rewards, moral and religious instruction,—thus tracing the evolution of their own characters. The questions

under IX and X will make each individual aware of his moral strength and weakness.

One other thing the syllabi will do for the teacher. In the light of the rich masses of facts which they are the means of calling out, the inadequacy of the present systems of psychology becomes startlingly apparent. We perceive that the conclusions which these systems embody have been drawn from the study of the phenomena of adult minds; they have not taken into account the greater part of the phenomena peculiar to childhood and adolescence, of those minds, in short, with which education has to do. We are forced to turn away from the books back to our facts, our unexplained facts. Who that has peered into these searchings for some clue to their relations has not at some time or other had a flash of insight which awoke the feeling that the explanation must be found in the application of the doctrine of evolution?

What we teachers crave is a science of the genesis of the mind, which shall trace the development of the individual child in the light thrown upon the subject by a study of the evolution of the race.

The value of the investigation is felt throughout our study. Again and again I return to the facts thus brought out as a basis from which to start in my development of psychological truth. Then, the ransacking of the stores of memory when once undertaken, proves so interesting that afterwards my pupils constantly resort to it for their own pleasure.

In bringing the syllabi before classes of children, substantially the same method was followed, I think. It is the skillfully managed discussion which brings out the facts.

PRELIMINARY REPORT ON THE LEARNING OF LANGUAGE.

HERMAN T. LUKENS, PH. D.,
Docent in Clark University.

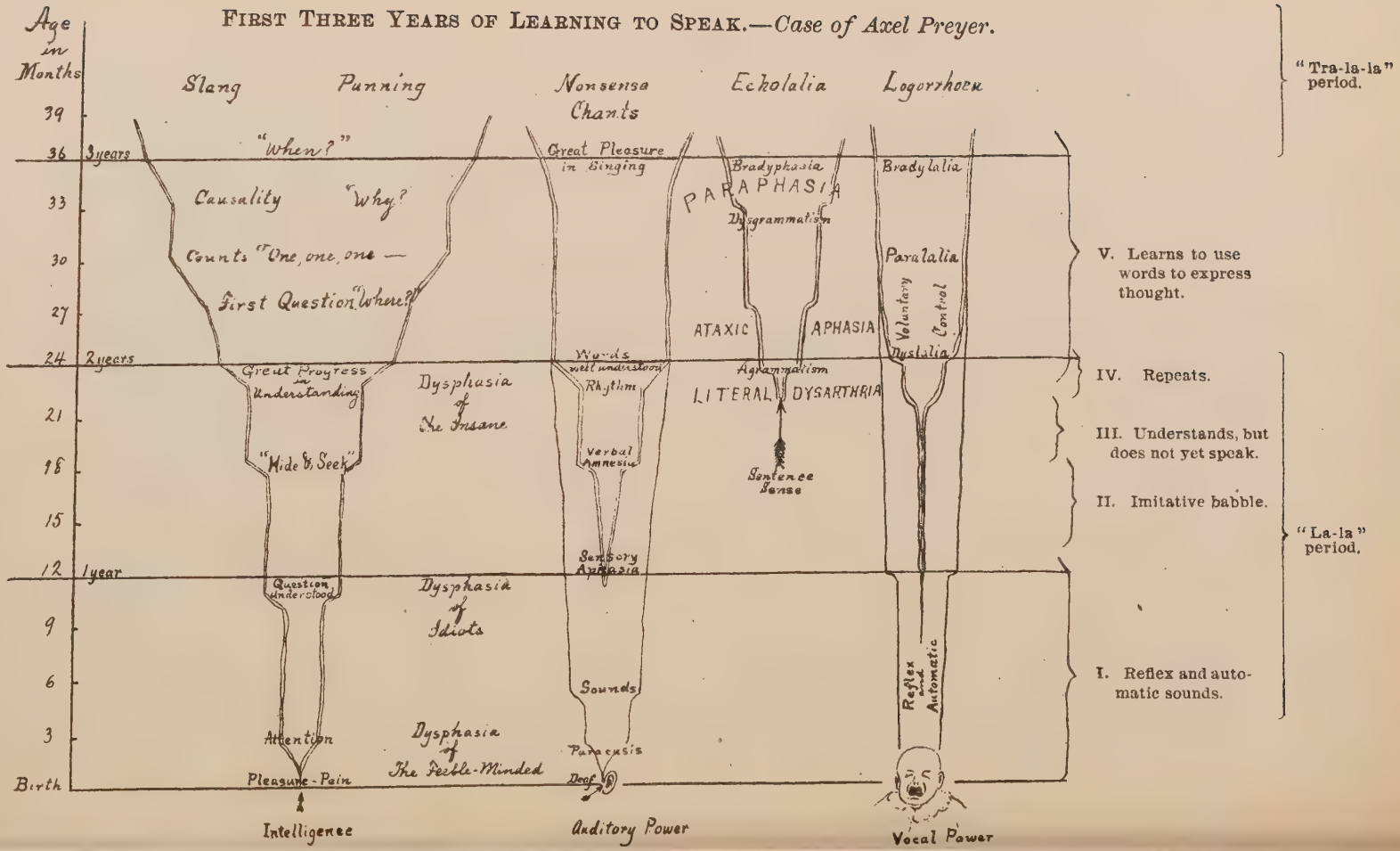
The following is a preliminary report covering a portion of my work in the study of the learning of language. There are three main lines of investigation open, which, being in a sense parallel in their steps, could reinforce one another by supplying, it is hoped, what is lacking in any one by a reference in one of the others. These three lines are: (1) the stages of decay of the language functions in disease, (2) the process by which the little child learns its mother tongue, and (3) the historical stages through which the race has passed in developing language.

The study of cases of aphasia affords us very much such a knowledge of the language functions as we should obtain if we could experiment on human beings by vivisection. The development of the theory of localization of function in the cerebral cortex is intimately connected with the history of aphasia. Most of the early work was done by the French pathologists, and is associated with the names of Bouillaud (1825), Dax and Broca (1861). The latter maintained that the seat of lesion in aphasia is "the posterior part of the third frontal convolution of the left hemisphere." It was also noticed that this is true for right-handed persons only, and that in left-handed persons the lesion is in the right hemisphere. Wernicke in 1874 introduced the distinction of motor and sensory aphasia. The former, sometimes known as aphemia, is the kind observed by Broca; while the latter belongs to the receptive rather than the emissive side of speech, and is characterized by a loss of memory for words, so that they are no longer understood when heard. Wernicke and Kussmaul traced the lesion in such cases to the first temporal convolution, which they therefore identified as the auditory centre. The next great advance was made by Charcot and his school. He saw that further distinctions were

necessary to discriminate between the language functions in spoken and in written speech. Hence arose the terms agraphia, the loss of motor memories of writing, and visual amnesia or word blindness, the loss of the visual memories of words. It was further observed that individuals differed widely with reference to their greater or less dependence on one or the other of these sorts of word memories. Ballet (1886) distinguished the motor type, visual type, and auditory type of internal speech. Further distinctions have also been introduced, such as syllable-stumbling, ataxic aphasia, psychical blindness and deafness, etc. These all tend to show the increasing appreciation of the extreme complication of the language functions and their intimate interrelation with all the other mental processes.

Whole classes of words may be lost and others be retained. One patient called scissors, "what we cut with;" he had lost all nouns, but retained the verbs and other parts of speech. In general, the more concrete the conception the more certain is the word to be lost when the memory weakens (Kussmaul). The abstract and symbolic parts of language, which are also, as a rule, those most often repeated, and therefore best organized, disappear last. The verbs, adjectives and pronouns, and still more the adverbs, prepositions and conjunctions, have a much more intimate relation to thought than nouns have. Hence, though learned latest, they are retained longest. The written language suffers more than the oral.

Preyer has taken some pains to point out the correspondence between "the normal child who does not yet speak and the diseased adult who for any cause no longer has command of language." And he adds, "To compare these two with each other is the more important, as at present no other empirical way is open to us for investigating the nature of the process of learning to speak." To make this comparison clearer and easier, I have made out the following chart from the data given in Prof. Preyer's records of his son, Axel Preyer. The names used for the different stages are taken from the pathology of aphasia, and indicate that at such and such an age this particular child exhibited symptoms corresponding to the diseases named. In general the defects of child-speech are found to be very unequally distributed among different ages and individuals, so that we cannot expect all the speech disturbances of adults manifested in typical fashion in one and the same child. [The spreading lines in the chart indicate the increasing functions of (1) intelligence, (2) understanding of sounds (and later of words from the 12th month on), (3) ability to form sentences (from the 23d month on), (4)


FIRST THREE YEARS OF LEARNING TO SPEAK.—Case of Axel Preyer.
Age in Months
39
36
33
30
27
24
21
18
15
12
9
6
3
Birth
3 years
2 years
1 year
Slang
Punning
Nonsense Chants
Echolalia
Logorrhoea
"When?"
Causality
"Why?"
Counts "One, one, one —
First Question "Where?"
Great Pleasure in Singing
Bradyphasia
PARAPHASIA
Dysgrammatism
Bradylalia
Paralalia
Voluntary Control
Dyslalia
ATAXIC APHASIA
Great Progress in Understanding
"Hide & Seek"
Dysphasia of the Insane
Words well understood
Rhythm
Agrammatism
LITERAL DYSARTHRIA
verbal Amnesia
Sentence Sense
Question understood
Dysphasia of Idiots
Sensory Aphasia
Sounds
Reflex and Automatic
Attention
Pleasure-Pain
Dysphasia of the Feeble-Minded
Paracusis
Deaf
Intelligence
Auditory Power
Vocal Power
V. Learns to use words to express thought.
IV. Repeats.
III. Understands, but does not yet speak.
II. Imitative babble.
I. Reflex and automatic sounds.
"Tra-la-la" period.
"La-la" period.

motor ability of speech, first as automatic sounds, and later as voluntary articulation.]

Compayré has also drawn a parallel between the child and the aphasic as follows: The child understands words without being able to utter them himself; the aphemic patient may likewise understand all that is said to him and be able to read while unable to utter a word. Just as children understand gestures before they do words, so there are aphasic patients who, having lost all knowledge of words, still retain an appreciation of gesture and facial expression. The prattle and babble that children so enjoy just for the fun of the thing without attaching any meaning to it, is very similar to the meaningless chattering of the patient who has lost all comprehension of any meaning, but still can use his vocal organs to make sounds. Many times a child will commence to speak and can utter sounds that he afterwards loses, and, nevertheless, he may be silent for weeks or months afterwards. So are the melancholiacs very loath to speak even a word or two and then plunge into profound silence. The little child stammers isolated words without coördination or sequence. There are likewise patients who possess only the débris of language, and repeat on and on merely incoherent syllables.

If we compare Ross's table of aphemia arranged with reference to the progressive extent of the disease, with the stages of the child's development as given in the above chart, we shall find a close agreement.

Powers affected in different stages of aphemia. *Ross* (On Aphasia, p. 71).	Stages in acquirement of language by the child.
5. Grunting sounds, and syllabic utterances not forming any word.	I. Automatic cries and reflex or impulsive sounds.
4. Occasional and recurring utterances of no speech value.	II. Imitation of sound, but without meaning; child babbles back when addressed.
3. A few intelligent replies to questions in single words.	III. Understands words, but does not yet speak beyond such words as "mamma," "papa;" "no," etc.
2. Repetition of words and reading aloud.	IV. Repeats words as sounds when they are said to him.
1. Spontaneous vocal speech in sentences.	V. Uses words to express his thoughts.

The Localization of the Speech Functions.

Animals deprived of their prosencephalon, thalamencephalon, and even the mesencephalon, are still able to utter cries, barks and the like; and acephalous children are likewise

able to produce crying and whistling sounds. The reflex or basal sound centre has therefore been supposed to be back of or below the corpora quadrigemina and to extend as far down in the spinal cord as to the centres for respiration (Kussmaul). In progressive degeneration of the centres of the medulla oblongata, the consonants and vowels drop out one after the other, stammering becomes an unintelligible mumbling, until finally only grunting sounds are possible, or in some cases even these cannot be produced. In this gradual loss of sounds there need not be any lack of coördination of the sounds into syllables and words, this therefore probably depending on higher centres. The words are pronounced correctly so far as the sounds are still possible.

So, too, sclerosis in the white substance of the cerebrum affects the mechanism of articulation and the prompt course of speech, but unless the cortex is affected the coördination of syllables and words in sentences does not suffer. Such a patient says, "Ar—til—le—ry." But the paretic patient in whom the cortex is affected says "Artrillerary" (Kussmaul).

The origin of the motor speech track in the cortex of the third frontal convolution, its course through the white fibres past the tail of the caudate nucleus and its ending in the nuclei in the medulla, have all been learned from observations on clinical cases, where post mortem examination has revealed degeneration of the tissue (Edinger).

There is probably nothing so calculated to demonstrate the complexity of the language functions as the study of the various phases of its derangement. For these the reader is referred to Kussmaul, Bateman, Ross, Starr, Charcot and others. The simple diagrams of nerve centres and connecting paths give a false idea of the extreme complexity of each case. Our nervous system is the most individual part of us, more so, even, than our physiognomy. Every disturbance partakes of that individuality. Then, too, every momentary state is a complex embracing in its fringe of weakly conscious elements contributions from nearly every part of the body. Language probably enters more or less into every mental action, and each one probably shows as great individuality in the character of his internal speech as he does in that of his thought or feeling. Queyrat makes four types: visual, auditory, motor, and normal or mean. Freud, however, quotes the case of a woman who could not speak nor hear except through tactile or taste or smell images. She could converse only while she held the hand of the person with whom she was talking. Other images may also play a considerable rôle as symbols. In fact any concrete image may serve

as the symbol or representative of any abstract idea. A person habitually attends to one class of images under certain circumstances, but depends on quite another group of images for other purposes. Thus one may be more eye-minded in imagery and poetry, employ space or direction images in philosophy and abstract thought, and yet be quite ear-minded in respect to words.

Those who maintain that the whole cerebrum acts in every phase of consciousness, shifting its focus now here, now there, but never limiting itself to merely some little part or parts of the brain, are therefore probably in the right. The penumbra of consciousness, which makes the background for that on which attention is focused, results from the activity of nearly if not quite the whole cortex at every moment. Even that which is brought into the centre of consciousness is so complex that we can never hope to analyze it, and it no doubt involves a large cortical area. Golgi's network of nerve fibrils would seem to point to such an extended fringe of consciousness.

In all layers of the gray matter of the central organs of the nervous system, there is to be found this fine, complicated, diffuse nervous network formed of (1) fibres from the nervous processes of cells of the first type (motor); (2) the nervous processes of cells of the second type (sensory) *in toto;* (3) fibrils which arise from those nerve fibres that are in immediate connection with ganglion cells of the first type ; (4) many nerve fibres *in toto,* viz., such as dissolve in fine threads, lose their individuality, and mingle indistinguishably in the network.

This network, says Golgi, is evidently intended to establish an anatomical and functional connection between the cell-elements of extended zones of the gray matter. Cajal is equally insistent on the important significance of this network. According to his view the development of any centre, the language centres for instance, depends on the collaterals which enter into this network becoming more numerous, and their branches and ramifications more densely knit together. No amount of exercise can increase the number of cells. These cease to multiply after the embryonic period.

Following Cajal's latest views, it is probable that the first or molecular layer of the cortex receives the last ramification of the sensory fibres, and that consequently here the discharge takes place between the neurons. The branching plumes of the protoplasmic processes of the pyramidal cells would thus be the region where the voluntary motor excitation commences. He compares the cerebral cortex to a garden of innumerable trees (pyramidal cells), which, as a re-

sult of intelligent cultivation, can multiply their branches (nervous processes), push out their roots (protoplasmic processes) further, and produce flowers and fruits each time more varied and exquisite.

Freud (1891) conceives the cortical speech zone as a connected area in the left hemisphere between the cortical endings of the auditory and optic nerves and of the motor nerve fibres to the muscles for speech and writing. The adjacent parts of the cortex acquire the significance of speech centres within the meaning of pathological anatomy, but not in the functional sense; because a lesion in this surrounding area interrupts the connection with adjoining parts, whereas a lesion inside of the speech zone itself does not break connection with the rest of the cortex.

In general the word forms the link between the object and the memory of it. There is a remarkable mnemonic power in speech. Thought unassociated with words very soon dies away from the memory. Even intense feelings, when never expressed, are soon forgotten (Ireland). Language, therefore, far from being restricted in its seat in the cortex to Broca's convolution or the Island of Reil, or the temporal lobe, or the angular gyrus, probably involves pretty much all the regions of the cortex. It seems to me that this is the most natural conclusion from Exner's investigations (1881). He found that an injury to the cortex in any other part than some places on the median and ventral surfaces led in certain cases to a disturbance of speech. And yet on the other hand nearly every part has in other cases been affected without causing the same disturbance of function. This is owing, no doubt, to the individuality of each person's mind giving greater stress or prominence to this or that element of conscionsness. We know that if a person is motor-minded, for instance, in language, his thought is almost annihilated when he loses the motor images. Another person, however, who uses the auditory word images in thought may lose the use of the motor images and be able to understand and think nearly as well as before. Now, something like this is true of every element of consciousness. All possible individual variations occur.

The fringe of half-conscious or sub-conscious elements represented in language,—feeling of muscle innervation, movement, space, direction, pleasure, pain, and variations of all kinds, mingled also with all the elements that go to make up the meaning of the word,—all enter into the speech function, and individualities and peculiarities will give to one or another of these a predominance that makes it essential.

For the proper study of speech localization, what is most

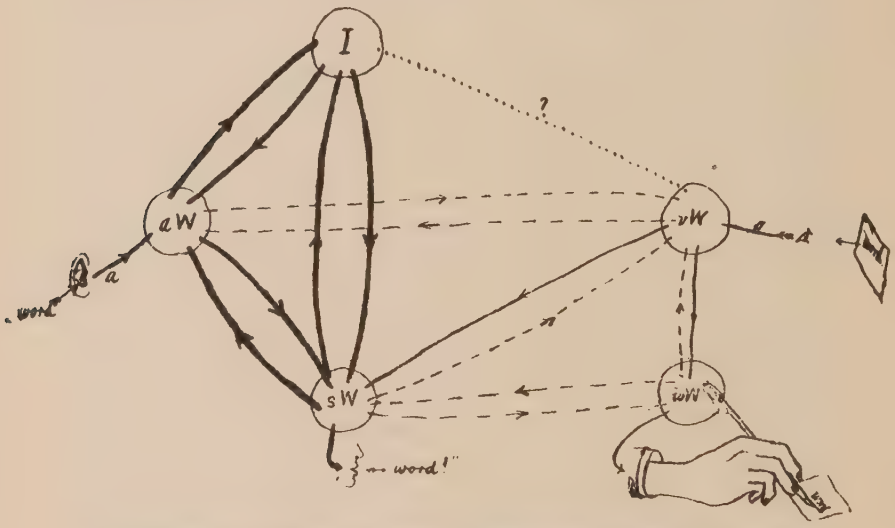
needed is, therefore, a more accurate and detailed account of the character of the aphasia. In all of Exner's cases, the post mortem report is reasonably complete, but the symptoms are so poorly described that in many cases he could say nothing more than that "speech defect of some kind" was or was not noticed. Later reports are very much improved in this respect, but we cannot hope to be complete and accurate enough to solve the question for a considerable time to come.

If, however, we restrict ourselves to the four prominent and essential centres, namely, the motor speech centre, the motor writing centre, the auditory word centre and the visual word centre, we may regard their localization in the cortex as well established. Goltz himself, so far from denying this absolutely, contradicts Flourens and maintains that there is localization, but that the centres are not so definitely *circumscribed* as the adherents of the localization theory, Hitzig, Wernicke, Munk, Exner, Flechsig, Sachs and others, are sometimes wont to make us believe.

With all this variation of individual types, how is it possible to construct a diagram of the relation of these centres that will serve for all cases? Should we not rather have to make a diagram for each individual person? I think if we consider the necessary steps in the child's learning of language, we shall see that there is at least a tendency to uniformity, so that we may speak of a typical diagram.

Since every one learns oral language before written language, and since the same order of precedence is true in the racial development, the motor speech centre and the auditory word centre have a far better established organization physically than the writing and reading centres, which are of comparatively recent and late development. Oral language dates from the dawn of man's life on the earth, no one knows how many thousands of years ago. Reading and writing are accomplishments of yesterday in comparison. In the brain of the human embryo the first infolding of the cortex to make the first beginning of fissures and convolutions occurs at the Island of Reil, thus pointing to that region as the oldest and therefore the best organized area of the cerebrum. No such established organization of the reading, and writing centres is possible. When the little child of five or six begins to read, he has already had four or five years of habit in calling up ideas by means of the motor speech and auditory word images. This and the whole force of heredity behind it reaching down through the thousands of years when the vast majority of people knew naught of reading, make, it seems to me, a good reason for marking these centres and their inter-

connections as primary (heavy lines in the diagram below), while the more recently acquired reading and writing centres are subordinate and secondary (light lines in the diagram. Other connecting paths, varying somewhat with the individual, are represented by dotted lines and the most doubtful path of all [v W-I] by points).



I=ideation. a=auditory nerve. a W=auditory word. s W=spoken word. o=optic nerve. v W=visual word. w W=written word.

Let us for the present leave out of consideration entirely all localization of these centres and understand the above diagram to symbolize the relation of these functions as they may be studied in the symptoms of aphasia, or in observation of children learning to talk.

The tendency to acknowledge the leading part played by the spoken or heard word images in internal speech is greater now than formerly. I do not suppose that any one who has really studied the problem would deny this prominence. Hughlings-Jackson, Bain, Ferrier, Ireland, Wyllie, Bastian, Lichtheim and Stricker have laid especial stress on it. Since the motor cells, motor nerves and muscles are the only organs of the will we know of, it is only to be supposed that a *voluntary* silent recalling of a word is motor (*i. e.*, a "*re-calling*," as the very word implies). In this sense, may we not say with Stricker that all men are motiles? In internal speech the motor images are always normally under control, and can

be repeated at will as often as we please, even in case of the most pronounced auditory or visual type. The auditory and visual images (probably called up by the motor anyway) are, on the contrary, mostly mere flitting phantasms that sometimes overpower us, sometimes refuse absolutely to come at our bidding, and at best are never as amenable to the will as are the motor impulses. The sensory word images, when they come apparently without the motor, are of the nature of hallucinations. Some of the most often quoted cases are taken from the insane asylums. And in normal individuals, even when the visual picture of the printed page is clear before the mind's eye, the eye gets no meaning from it till it *reads off* what it sees, and this reading off is motor. I am far from denying that most people are aided in recollection by calling up the image of the visual word or auditory word, but that is very different from saying that they can dispense with the motor word in internal speech.

When the little child learns to read, can he therefore be made to associate at will the meaning with the visual word image, or is some other path made necessary by the circumstances we have just been considering? When the child (or any one for that matter) sees a new visual symbol, he must be *told* what it means, or it must be suggested to him in some way, so that he shall *call up* that meaning in his mind. If the only handles for ideas that we have by which to call them up are the (motor) word images, then the advocates of early silent reading are wrong. The *word*, as visual symbol, auditory image, spoken word and written word, afterward becomes one unit, a complex that must and should fuse into one whole, with the motor elements as the handles for voluntary control. In order to utilize the child's past store of ideas and not waste time by relearning everything, the oral element must continue to be dominant, since it is the key to the meaning of the new symbols (visual word). The deaf-and-dumb are of course as dependent on motor images for internal speech as any one, the kind depending on whether they have been taught lip-reading or finger alphabet.

I think we may therefore conclude that, just as early peoples had visions when they thought deeply and confused mental images with reality, just as the Indians and other savages nowadays *act out* the story that they tell, so should the little child have the full expansion of all his activities before he can have repressed or subconscious ones. Let him have "hallucinations," talk to himself, imagine he hears voices, and act out in dramatic form his thoughts and plans. Silent internal speech, which is rather a late acquirement anyhow, can only come when he gets old enough to live in an atmos

phere of faded sensation and repressed movements as we adults do.

In the correction of errors in language the ear can be more easily trained than the eye to recognize and use correct forms. Children appreciate and take delight in matters of euphony. Pretty sounds are enjoyed, and if matters of this kind receive their due place early in life, they will later widen out to beauty of style. The ear is the organ of the emotions more than any other sense, and there is much less danger from too great use of the ear in early school work than of the eye.

In the matter of rapid reading, no doubt pupils should receive training. In the grammar school and high school they should be accustomed to silent reading, and perhaps even be given regular lessons in skipping and skimming over books and articles to get the gist of the subject in the shortest time. Give pupils say one hour to get the substance out of one hundred pages of supplementary reading matter, and then examine them on it. But this is work for the upper grades, not for the lower.

The Stages of a Child's Learning to Talk.

(See chart, p. 426.)

I. Reflex and Automatic Sounds. The new-born child is deaf, and its hearing is imperfect for some days. Difficulty in hearing continues to exist normally for some time. The first thing with which the learning of speech begins is not, as was formerly assumed, the first cry of the newly born, for this can have no other significance than that of a reflex, like sneezing. In fact it often is a sneeze instead of a cry (Preyer). But after feelings of hunger, wetness, cold, fear, anger, sleepiness, etc., have been discriminated, crying acquires a speech significance, and the mood of the child may be perceived by variations in its voice, all of which helps mightily in the care of very young children. The long-drawn-out cry of hunger, sometimes accompanied with explosive sounds, the fretful, subdued and monotonous sleepy cry, the short, high-pitched yell in response to some physical want, and the loud cry of anger, seem pretty well characterized. At the very first the sentient and emotional part of human nature seems to have a greater share in the origin of language than the intellect.

The important function of crying in opening up the air vesicles of the lungs for the entrance of air immediately after birth and in exercising in a beneficial way all the muscles of

breathing, has been pointed out by various writers. The free use of the voice is probably a tonic to the whole respiratory system throughout the years of growth and development. Deaf-mutes, using their voices much less than normal children, are believed to be especially prone to chest affections (Wyllie).

The early babble. For the sake of studying the very beginnings of words and if possible of tracing the development of the power of articulation, I have collected a number of tables of the sounds made in the first year as mere meaningless chatter. The returns are not yet sufficiently numerous for my purpose, but perhaps warrant the suggestion that the sounds made in pleasure and pain, and hence having a certain amount of expressive power, are mostly vowels (early) and vowels combined with gutturals (later). Mere play sounds, on the contrary, are perfectly free, now exercising the lips, now the tongue and palate, and again the throat parts. During the whole first year the sibilants seem almost wholly wanting, although somewhat similar tongue sputterings are common. *F* is probably not distinguished from *p* by the observers, since if made at all before the incisors come, it must be a labial *f* (or *ph*).

This first la-la period, which in some children extends through the second year and, in a less conspicuous form through the third year, usually breaking out again in a second la-la period ("tra–la–la period," see p. 449), just after the child has gotten well over the first troubles of learning to talk, is one of the nascent periods for the development of the vocal organs. The child plays with his tongue and lips, making new sounds just for the fun of it. "This idle experimentation is often very striking. The saliva running back in the throat is often utilized to produce a gurgle which it is utterly impossible to represent, but which is continued and prolonged with evident pleasure" (Van Liew). It is a play exercise exactly analogous to the restless, impulsive, automatic movements of the young child's hands, arms and legs, preceding the voluntary and consciously controlled acts. This childish delight in sound should not be hushed up, and need not hinder the learning of language in the least. Its sole office is to give exercise to the vocal apparatus and partly on sounds the child otherwise would not use. This keeps the organs plastic and growing for a longer time than otherwise, by retarding the formation of rutty habits at an early day before correct pronunciation is acquired. This matter of course has nothing whatever to do with the other question of whether "baby-talk" should be encouraged. This latter will be treated further on.

Humphrey's little girl is reported as pronouncing all the sounds correctly, learning the linguals in her eleventh month. But at the beginning of her second year her facility of utterance seemed lost, and she had now to begin and go through all the stages of mispronunciation like other children. Axel Preyer lost several sounds later that he early mastered (*th*, uvular *r*, etc.) Prof. Grandgent reports a similar observation on his children (*g* and uvular trill). Dr. Van Liew writes me in regard to his little girl that in the third week of the seventh month, any considerable variation in vocal combinations disappeared, and many of the combinations never appeared again, others very rarely; the child preferred to laugh or scream instead." A mother writes from Philadelphia: "Among the sounds B. has lost the power to make are an elaborate vocalized lip trill, and a sound like a bird note, 'cut-a, cut-a, ca-dee dee dee!' The latter he said very prettily in his throat, but he cannot say it now" (two years nine months). It is a matter on which data are difficult to obtain, since observers are apt not to notice such transient sounds.

II. Imitative Babble. We find the imitative portion of the la-la period begins with "a curious and amusing mimicry of conversation, in which the ordinary cadences, intonations and rhythms are so closely reproduced that persons in an adjacent room would mistake it for actual conversation." This mimicry of conversation by nonsense babbling is reported of very many children from as early as four months old up to in some cases the beginning of the third year. It is the music of what is said that is caught at first, while the child has as yet no ear for the harder sense (Earle). One mother writes of her little girl aged two years: "She makes no attempt at connecting words to form sentences, but most of the time in her play, she is going over certain sounds like '*da—la—ma*,' and such. If asked to repeat a little sentence, she would utter a lot of gibberish, and we judged our talking must sound that way to her." Another mother describing this phase says: "There was a time for two or three months when my little girl was a year old that she made a great deal of noise sounding like talk — very rapidly and constantly, but it was impossible to distinguish the sounds clearly enough to copy them. The intonation was so perfect that I have had visitors ask me who was talking so fast upstair" (Mrs. Barus).

Similar observations have been recorded by Preyer, Champney, Tracy, Sigismund and others, and it seems to be generally true that the musical part of speech is more early imitated than are the distinct sounds as such.

Of course we all know it continues to be the case with much older children long after they have learned to talk perfectly, that their speech is fuller of musical cadences, intonations, inflections of voice and accent than is that of adults. Later on we shall see that in the early stages of sentence formation where one or two words are used as a rudimentary sentence, tone and gesture perform the function of grammatical inflection and syntax, marking distinctions of thought long before they are represented by separate words. So, too, the child guesses or divines the meanings of words far more through the accompanying tone, gestures and looks of the speaker than by the spoken explanation.

III. Understands, but does not Speak. The transition is sometimes so gradual that daily progress may be observed, but not infrequently the energies are drained off in another direction—by growth, teething, sickness, learning to walk, etc. In such case the progress in language may remain nearly stationary for some months. "I noticed," writes a correspondent, "that my little girl while learning to walk (at sixteen months) did not attempt as many sounds as previously." Another writing to Babyhood says: "I spent many anxious, tearful days and months over the unaccountable backwardness of my first-born in learning to speak. 'Goo-goo' was the first word he uttered, when about a year old, and 'goo-goo' remained his vocabulary for another year. Papa, mamma, food, dog,—everything was 'goo-goo.' We were in despair, in spite of the bright, intelligent look of our little fellow and the doctor's assurance that there existed no organic difficulty. At last, as if by magic, the spell was broken, and from that moment the flood-gate of a quite unusual talkativeness was and remained open. I can console many an anxious mother with my own useless anxiety." Du Maurier tells us that he was a late speaker. His parents thought him dumb. One day, however, he surprised them all by coming out with a long sentence. It was, "*Papa est allé chez le boucher pour acheter de la viande pour Maman*" (*McClure's Magazine*, April, 1895). Delays of this kind followed by the sudden making up of the lost time are really perfectly normal, both on the physical and the mental side. In the chart on p. 426 they are represented by the offsets in the spreading lines symbolizing the growth of intelligence. Similar sudden and rapid growth occurs in the other functions.

In the case of Preyer's boy this third period lasted some months, and was characterized by a good understanding of words without much effort to use words himself. The few sounds that have any speech value are most strongly marked

by intonation. The way in which a child says a thing conveys the meaning rather than the mere word he may use. The mood is recognized by the voice better than ever before; and desire, grief, joy, hunger, willfulness, and fear may be expressed by the various modulations of the self-same word differently employed. Hence a child may get along very comfortably with apparently a very small vocabulary. How exceedingly misleading it is to say such a child's vocabulary consists of only ten words or fifteen words, or the like! Those ten or fifteen sounds may do duty as a hundred or more words. Preyer catalogued at one time eleven different meanings of "*atta*" as then used by his child, and distinguished by the tone and accompanying gestures. How many more meanings were used at other times he does not pretend to say.

Invented Words.

During the latter half of this first la-la period (second year) with many children, it is usual for certain natural sounds to acquire the significance of words. These are often spoken of as words invented by children. The process may in certain cases be carried still further, until under favoring conditions it may develop into a real original child language. (These more unusual cases will be treated in a later report on "Original Child-languages.") This phenomenon, like all other individualities, has its corresponding trait in nearly all children, but is soon stamped out by the repressive influence of parents and elders in insisting on uniformity to their standard. It perhaps is strongest in those children in whom the impulse to imitation is weakest.

Words for food are among the commonest of such originalities. A little Boston boy, A——, used "*mmh*" for all food and drink, making this sound whenever he was hungry, and giving it various inflections. Thus he will say "mmh, mmh, mmh," and mean "I want something to eat," or "I want a drink." When his mother or nurse guesses the right need, he says "mmh!" with satisfaction. Sometimes he points to various foods on the table and asks "mmh?" as much as to say, "May I have that to eat?" (Miss Wiltse).

Various other children are reported as using the following natural sounds to designate food or drink: *Mum* (Darwin's boy), *ham* (Taine's little girl), *numby* (another English girl of two years), *möm* and *ngö* (Preyer's boy), *boo* ("I like my boo," Philadelphia boy of two years nine months), *nin-nin* or *nin, nin, nin* (a little Michigan girl of fourteen months,

and later she extended it to mean other things beside food), *ning* (same child used this sound=milk or bottle), *numĕnēē'* (a little girl in Kansas), *nee-nee* (same child used this sound =eggs), *din-din* (Kansas boy of nine months called his mother's milk by this sound), *büh* (=all food. Boston boy of sixteen months. When hungry he says *beah, beah*), *nana* (perhaps from "banana." Boy twenty months), *me* (=bread), *to-to* (Barnes), *da* (Tracy), *nä, nä* (repeated) or *nĭ, nĭ* (=milk, bottle, dinner. Illinois girl, eighteen months, Van Liew), *clink* (=meat. Kansas boy of eighteen months), *tănănny,tănănny*(=coffee. Same boy at fourteen months), *ish* (=anything to eat. He calls kitchen "*kish*," and "*ish*" may be derived therefrom), *tuppa-tuppa-tee* (=potato. Tracy), *thŭrps* (=potatoes. Boy of three used this word throughout his childhood. Mr. Dawson), *oo-oo* (=water), *goo'gägōō* and afterwards *gä'goo* (=water. Little girl of eighteen months in Worcester), *nōō'nee* (=water. Boy, sixteen months). *Other words* are less frequent, but still by no means uncommon. A boy (two years nine months) in Philadelphia used "*rēē*" as a verb, meaning "to dig or to shovel" ("See that man *ree* coal"). A Kansas boy of eighteen months calls himself "*būzey, būzey*" when hurt. Another child uses "*goo*" for almost any movement (Barnes). Rolling objects, balls, marbles, coins, balls of twine, pencils, etc., are greeted by a boy of one year six months with the cry "*golloh*" (Kussmaul). A little girl (one year six months) imitated rolling movement by "*lululu*" and "*bululu*" (Steinthal). A little girl in Worcester used the word "*tunies*" for children till she was three years old. A girl of two years six months called vaseline "*me-ne-me.*" When she wanted her mother to fasten the scalp of her doll on again after it had come loose, she placed the doll in her mother's lap, and then put her fingers first on the hair and then on the doll's head, saying, "me-ne-me, mamma, me-ne-me." A little girl of three years six months in North Carolina still sometimes makes a sound of "*m—m—m—m*" when going to sleep, and says often, "I am going to say '*m—m—m—m*' to-night," or "when I take my nap." Mr. Sweet's little girl of two years used "*diddle-iddle*" for "hole;" hence it came to mean a thimble, and later a finger. "*Wasky*" meant the sea. "*Bilu-bilu*" was invented on learning the first letters of the alphabet, and always used for the printed character "&" (Romanes). Another two-year old girl used "*nunny*" for dress of any kind, "*milly*" for dressing and any article used in dressing, *e. g.*, a pin. She called her nurse "*Lee*," although no one else called the woman by any other name than "nurse." She imitated the sound made by the nurse in pretending to drink,

and hence called "drinking" "a drink," "drinking vessel," or "glass of any kind," "*af-ta*" (Romanes). A little Kansas boy (two years) is reported as calling flies "*bannies.*" A Massachusetts boy of twenty-two months had the following original words: *Laly!* =angry exclamation; "*da-da-da*" =toes; "*gug-gug*" =spoon; "*mung* or *ming*" =more.

In Dr. Hall's "Notes on the Study of Infants" (PED. SEM., I, p. 133), he says in speaking of the purely automatic sounds made by his children: "Every day there are new noises or variations. I distinguished sixty-three of these in B. before he was five months old, and heard nearly forty of them in a single morning when he awoke happy, earlier than usual, and lay in his crib. Several of these acquired a well defined meaning, were caught by G. and persisted in long after the others had given place to conventional speech, *e. g.*, *ap* =repulsion when things were thrown down; *ahem* =anything good; *ugh* =yes; *eh* =designating anything with pointing. Their noises were too well understood by each other, the younger holding the older back, and perhaps too well heeded by nurse and mother for speediest development of the power to talk."

Originalities that are based on analogies form a sort of transition to the mere acceptance of words as used by others. Of course analogy and imitation no doubt had a good share in the inventions quoted above, but so far as my information goes, the above examples are distinctly more original than those that follow. Analogy implies already a good stock of experience before it can operate, and hence may be considered a step higher in development.

First a few examples of imitation and then of onomatopœia taken from various ages. The mother of a little girl writes: "In her twenty-third week, I said 'pap-pa-pa;' she pursed her lips and got a '*prr-psr*' sound. The next week I tried it again, and she responded by making her lips reverberate without sound." "Since a year old R. has often imitated the coughing of adults, apparently without meaning to. One day, when she was almost eighteen months old, her mother said '*outch*,' and immediately came the imitation by the child, which was very good. It could not be gotten again. The shouting of boys on the streets will often awaken in her a similar cry. Then she runs to the window. * * * * * One day early in the eighteenth month she heard the rooster crow, and immediately responded by an exact imitation of the movement of the crow, but using the sound of long *oo* (*i. e.*, — ∪ — ∪ — —). This is one of the few sounds imitated from the environment

that we could get her to repeat. It deteriorated by repetition. The element of bashfulness entered in. * * * * Spontaneity is very characteristic of these productions" (Van Liew). Another little girl of two years, who does not put words into sentences yet, "tries to imitate almost every sound she hears. A whistle blowing is somewhat like "*uh*," but a chicken crowing is indescribable."

Of course onomatopœia is common enough from the latter part of the first year onward. One child is reported as imitating a cat's mewing, a rooster's crowing, a cow's bellowing, a dog's bark, a quail's note, a goat's bleat, an owl's hoot, a goose's hiss, another baby's cry, and also his own cry, the ring of a door-bell, the puff of a cigar, a train of cars just starting and puffing, blowing the whistle and ringing the bell. He is 17½ months old.

A four-year-old boy while riding in the steam-cars amused himself by pushing the little bolt back and forth that keeps up the window blinds, remarking as he did so, "Hear it say '*chick, chick.*'" "My little boy, aged four, coined the word '*gur-gel-ing*' in attempting to describe the sound of water running down his throat. He afterwards learned to use the word 'gurgling,' but the first word was a pure invention" (Mr. Dawson). Other children are reported as attempting to imitate the sound of "milk being milked from the cow into a tin pail," of "meat cooking," and of "the trolley cars as they pass."

The origin of imitation lies in the reflex (Wernicke). Memory is a restrained imitatory reflex (Bain). Analogy is a combination of memory and originality. The lack of the higher inhibitory centres in childhood leaves the imitativeness and suggestibility uncontrolled. All of the following examples are taken from a later stage of the child's development than the first la-la period.

A little girl (two years) called bread = "*poor*" because of the motion of "pooring" which she uses in making it up. A boy of twenty-two months pronounces bread "bur," and hence calls cookies = "*cooky-bur.*" Another used the expression "*bettern't you?*" for "had you not better?" (Sully). A girl of twenty months called her cousin "*go-go*" because he took her riding often. Another a little older coined the word "*goppled*" to designate the motion and sound of a lamp swinging. "Papa must put on his overcoat and his *overhat*," said a little girl of three years six months, and spoke of a telegraph-pole as a "*pole-graph*," and called a photograph a "*picture-graph.*" She says, "Can't I be *sorried?*" (*i. e.*, forgiven). "I want a *truly* match" (=real). A boy of four years, after leaving a metal toy in

the summer sun until it got too hot to handle, wanted to know "how shall I get it *unhotted?*" Another is proud "he can unlock doors and *inlock* them too," and likes to have his mother dress him in the morning "when she is *nightied*" (*i. e.*, in her night-gown). Mrs. Jacobi tells of a child of four years six months, who remarked on one occasion after applying an axiom she had learned, "I knew what I was *thereforing.*"

Eleanor, on the evening of her fourth birthday, remarked: "See the light of the moon on that door and the shadow of the trees in it. I used to be afraid of that last year, but I know more now, — kind o' *four yeary!*" "What makes you so agreeable?" she said the other day, and then with a stamp of her little foot, "*un-agreeable*, I mean. She frequently uses such expressions as, "We love *our-jethers* more than tongue can tell or say." "*Our-jethers*," "*their-jethers*" are suggested by the wrong separation of the parts of the words "*each-other*" (*ē-jether*), and perhaps have some analogy to "*ourselves*," etc.

The pet-names and nick-names that we all use come under this head. Helen Winslow had names for her cows, "*Spot*," "*Black-leg*" and "*Lop-Horn*," and called her favorite sheep "*Tommy*," "*Fanny*," "*Crook-Toes*" and "*Mouldy-Nose.*" A pet chicken received the name "*Pe-swop-squedle-bug.*" Another girl used to call her cousin "*nuddy.*" A young man of nineteen used the affectionate name of "*Hickory*" for his brother. I have a very good friend who calls me "*Sarkophagus*," and his wife is "*Nubbins.*" His other friends are "*Slobs*," "*Tap*," "*Dulcis*," "*Emperor*," "*Nibzy*," and "*Poddles.*"

While as before remarked all of this usually belongs much later than the first la-la period, yet it illustrates a phase that begins with the earliest words used. The school-boy nicknames, "*Big Skinny*," "*Little Stiffy*," "*Pie-crust*," "*Stiff-legs*," "*Badger*," etc., are epithets, and represent the same stage of language development as produced the names "moon" (=measurer), and "king" (=the one who can, *i. e.*, the mighty one). Phonetic decay is also illustrated in these cases. A little Boston boy named Hall had a nickname which gradually degenerated to "*Alka*" or "*Alky.*" "*Lon* Bronson" (Alonzo), "*Ange*" (Angelo), "*Yarn*" (Aaron), are also examples.

Before leaving this subject I want to call attention to two points:

1. This inventive stage may degenerate into the silliest, emptiest nonsense, holding the child back in his progress and injuring his development permanently if it is too

far encouraged by parents and others through adopting and using the babyish nonsense themselves, or even by recognizing it and letting the child see that it will pass as language. One unfortunate infant brought up under the tutelage of such a Georgy-porgy, wheely-peely baby talk mother, called a dog a "*waggy*," a cow a "*horny*," a horse a "*ha-ha*," a nut a "*cacker*," his nurse "*wow-wow*," and a banana a "*parson*," and kept it up till he was four years of age (Marion Harland). When little children are much together, the younger are apt to hold the older ones back in this way, and this can only be overcome if the parents themselves never descend to use such silly talk, but on the contrary insist that their children shall do their best in attempting to speak correctly. One object that I have in this study is to point out the necessary and natural stages in learning to talk, so that parents will see what the natural way is and will neither expect too much of their little ones before the proper age and worry over them because of their failure, nor, on the other hand, will retard their development by keeping them at lower stages when they are old enough and strong enough to do better.

2. The other point has reference to the origin of language. Most if not all the current theories give their whole attention to the supposed speaker, or maker of sounds, ignoring the hearer entirely. It seems to me the question of what sounds will attract the attention and be understood by the hearer, is at least as important a question as what sounds the speaker will naturally make. In calls to the lower animals this element comes out clearly. In a recent article in the *Chautauquan*, Mr. Alfred H. Peters points out that the call-words addressed to the horse, cow, sheep, cat, dog, chick, pig, duck, etc., are for the most part originally imitations of the sounds made by the animals themselves. In some cases our names for these animals while in the beginging derived from such sounds, later when no longer used as call-words, are apt to lose their onomatopœic character. It is important to observe here that as call-words, the exact articulate sounds are of much less consequence than the tone, modulation of the voice and in general the way in which they are called. Hunters know that the sounds to which wild animals pay attention are such as are made by these animals themselves or by their prey, or else those made by their enemies, and which therefore serve them as warning sounds. The late Frank Bolles used to take his tame owl with him when he went bird-hunting, because the owl's peculiar note attracted many of the shy birds, who came nearer to inspect their natural foe, and thus afforded Mr. Bolles an oppor

tunity to study them. In a similar way an imitation of a blue-jay's squack will entice many other little birds that otherwise would remain where you would never see them. The lower animals learn to associate the cries or roar of their prey or of their enemies with the idea of such prey or enemy. These sounds thus become to all intents and purposes symbols of ideas as truly as words are for us. It is a lower level of symbolism in which a part stands for the whole instead of one thing representing an entirely other thing, as do our words. Such cries, barks, etc., together with those they make themselves, become for any kind of animal the sounds to which they give heed, and therefore the first to which they attach meaning.

Is it not a similar case when the mother or nurse imitates the child's babble and says "papapapa" or "mammama" or "baby"? These and all the orignal words for food quoted above are mere natural sounds that come to have a meaning by the fact that the parents or others adopt them and accept their use by the child, who thus gradually associates meaning with them. It is well known that these same sounds occur in nearly all languages, but the meaning varies, especially among savage languages, although always pertaining either to the child or parents or food, or other necessity of the early months of life. Baby talk is of the rankest growth among savages, and undoubtedly played a greater rôle in the past than it does at present, being now so far extinguished by the greater necessity of conformity to adult usage.

The Child's Pronunciation of Words.

Leaving now the first la-la period behind us, we arrive at stages IV and V, when children repeat and use real words. The points of which I wish here to speak are the mispronuntions and the development of the sentence.

Schultze, Noble, Tracy and others, who have written on this subject before, have declared that the easy consonants come first, and those more difficult come later. They fail utterly, however, to show wherein *t*, for instance, is easier than *th*, or in general wherein one tongue consonant is easier than any other. There is, nevertheless, one good and intelligible reason why the child's early sounds are at any later time easier for him than other sounds, viz., because he has *practiced them a longer time*. For example, nearly every child at two years of age finds that he can pronounce *t* and *d* much more readily than *k* or *g*, because he has been practicing the former for months and perhaps has not yet begun

to use *k* and *g* at all. But this does not explain in the least why most children do pronounce *t* and *d* earlier than *k* and *g*, nor does it mean that the former are "physiologically easier in their very nature."

Kirkpatrick assigns three causes for mispronunciation: (1) Difficulty of combinations even when the component sounds are separately easy, (2) modification by preceding and succeeding sounds, (3) mispronunciation or careless pronunciation by the adults whom the child hears. Sully points out still other factors: (1) The accented syllable is commonly reproduced, (2) initial and final sounds have the advantage over the middle in the competition of sound, (3) the lingual facility of the sound-combination, (4) length and form of the word are reproduced even when the child does not get the separate sounds right, (5) consonants are sometimes introduced to aid in pronouncing initial vowels, etc.

All of these points are good as far as they go. It seems to me, however, we must first of all try to distinguish the *sensory causes* of mispronunciation (including some that are purely psychological) from the *motor causes*. I shall take them up in this order.

I. *Sensory*. The child has to depend on the ear almost entirely in the difficult task of recognizing, analyzing and imitating sounds. He gets some slight help from seeing the lips, but has no aid from alphabet or phonic system. It is difficult after we have learned our letters for us to continue to appreciate what a vast help they are in acquiring new words. Good teachers recognize this fact by not insisting on a strict adherence to the word-method, but by bringing in the alphabetic or phonetic analysis as soon as possible. The difficulty of distinguishing the different sounds by the ear alone is illustrated by the mistakes made by adults in repeating nonsense syllables in the laboratory, or by those who attempt to learn Chinese or Russian by ear without using books. Miss Wiltse reported some ear-tests in the *American Journal of Psychology*, Vol. I, p. 702. Initial *p* was incorrectly heard in 482 cases out of 1060, whereas initial *k* was not missed once. The difference in sonorous quality and in carrying power of the consonants is of course very great. Hempl (in his new German Orthography and Phonology) points this out very clearly. In such a word as *hand* there is the very sonorous sound *a*, the less sonorous *n*, and the very unsonorous *h* and *d*. "Arranged as they are in this word, the sounds present but one prominence of sonority,

namely, at *a*, which may be represented thus . ⋮ ⋮ . , and the word is felt to be monosyllabic." Listen to voices calling at

a distance and see which of the sounds retain their individuality most clearly and carry best. Many people cannot pronounce a new name for certain until they have been *told* what sounds it contains, and hence always ask how it is spelled.

Modern attention to spelling is in part no doubt a result of increase of eye-mindedness of the human race. All the world goes to school nowadays, and crowded schools require more work with the eye than the ear. This is accompanied by a corresponding carelessness of pronunciation in proportion as the attention is withdrawn from the auditory and motor images. Children who do not speak well at the normal age, require careful attention in this respect.

Sounds are modified by combination as well as by the preceding or following vowel. In such combined form as *bl*, *br*, *ch*, (*tsh*), *kt*, etc., the elements are more or less obscured to the ear by being modified in the articulation. Hence the child has difficulty in recognizing the elements, and cannot without considerable practice modify them properly. Especially is it true of the cognate sounds when combined, *e. g.*, *mp*, *mb*, *nt*, *nd*, etc. These really dovetail into each other, the vocal adjustment of both sounds being exactly the same, except for the change in position of the uvula and soft palate.

As is well known, children clip words, sometimes at the beginning, most frequently at the end, and occasionally in the middle. These are not mispronunciations in the same sense as the use of *t* for *k* is, and it is absurd to mass all such cases together, as if they came under one rule. Examples: (1) Beginnings clipped, *seen* (machine), *nā̆ā̆'na* (banana), *tato* (potato), *lainee* (allein), *toosed* (excused), *brella* (umbrella), *nuff* (enough), *pose* (suppose), *fährlich* (gefährlich), *bou* (tambour), etc. (2) Ending clipped, *mō-mē* (more meat), *pĕ* (pencil), *po* (porridge), *mou* (mouth), *bĕ* (bed), *bŏh* (bonnet), *baa* (bottle), *yeh* (yes), *ti-ti* (tick-tick), *pickie* (picture), *Sampy* (Sampson), *tocky* (stockings), etc. Indeed all of those cases where *y* or *ie* is added or substituted at the end of words, belong here. It is totally misleading to say in such cases that *ē* or *ie* is a substitute sound for *t*, *r*, *n*, or the like. It is just like the "*er-r*" that slow speakers use to fill up the gaps in their sentences with. The child uses "*ie*" to fill out the latter half of the word which he did not hear, or did not take the trouble to hear and pronounce. (3) Beginning and ending clipped, *at* (katze), *nine* (kaninchen), etc. (4) Syncope, *soun* (sit down), *pato* (potato), *pettote* (petticoat), *pā̆-tā̆-sōō* (patent leather shoes), *locotiwe* (Ger. locomotive), *potnā̆* (portemonnaie), *hankish*

(handkerchief), etc. On the other hand, (5) prefixes and suffixes are added, thus one child (twenty-seven months) used "*ah*" both as prefix and suffix, "*ah-pie-ah.*" Another uses "*oh*" similarly. The commonest suffix of course is "*ē.*" Examples: *Cuppy* (cup), *forky* (fork), *doggie* (dog), *bady picky upy nuts* (baby [will] pick up the nuts), *sitty ony fōr* (sit on the floor), etc.

Sounds may be inserted that are superfluous entirely. Sometimes it seems as if they resulted from an overstrained effort to analyze a combination, other times they are cognate attractions, and sometimes are put in as resting points when the vowels are too numerous. Examples: *flamily* (family), *Autschge* (Auge), *baugrête* (brouette), *toujer* (tuer), etc.

Vowels are of course very frequently incorrectly given and very usually, I think, from failure to appreciate the precise difference between the sound as the child hears others give it and as he gives it himself. To be sure, however, the motor inexpertness is also a large factor in the cause.

A considerable number of phantastic mispronunciations, such as "*bī-ter-heel*" (bicycle), "*webenau*" (fledermaus), *mangie fag* (American flag), *nunastan* (understand), and the like are simple absurdities owing to careless hearing, poor memory of sounds (short memory span), or confusion. Contamination of different words is shown in the following: *stēpo* (station and depot), *esprised* (surprised), *apurncot* (apricot) *uppervator* (elevator), *acquelocque* (enveloppe), etc. A little girl of seven years confuses *expedition* with exposition, *girl's-eye-view* with bird's-eye-view. I recently heard a college president in the course of his lecture say "a silk dress '*brustles,*'"—and then catching himself and correcting,—"a silk-dress *brushes and rustles.*" "*There goes a completion,*" said a Boston boy (4 years 8 mos.) the other day. He gave a quick, anxious glance at his mamma to see if he had blundered, but she kept the laugh back and looked at the passing policeman. Shortly afterward the policeman passed again, and A — seeing him, dropped his eyes and asked, "Who is going past the house, mamma?" (Mother) "The *policeman.*" Next time he passed, A— said, "There goes the *compléceman* again" (Miss Wiltse).

"*Pink* is easier to say than *'sturtium* (nasturtium) is," remarked a little girl of three years seven months. "*You don't have to think about 'pink.'*"

Punning and Chanting. Children early show an appreciation of puns, playing with words as much as they did when they were babies a year or a year and a half old. The difference, however, between these two periods is this: the early one, coming before words have become fixed in the

memory, is rather a play with the tongue and lips; in the later period, at about three years, the words themselves become playthings. In the former it is chiefly a play of the motor activity, in the latter it is a play for the sake of the sensory element and the sense. A little girl of three years six months was going over her letters: "R is for 'ring,' S is for 'story,' T is for 'Tommy'— O, no, *tea* would make him sick" (Miss White). — "Grandmamma," said a little girl of three years five months, "we'll have to call you Mrs. Brown." "Why so?" asked her grandmother, "'Cause you *brown* sausages." —"Garter sounds something like Carter, doesn't it?" ("How are they different?") "One is a lady's name and one is a garter's" (Eleanor B., 3 years 7½ months).—A mother of a boy two years nine months old writes: "Though I and every one else had tried to teach B. to say "papa," he refused. At last a gentleman named Mr. Parker called on me. I said to B., "Do you want to go to the parlor to see Mr. Parker?" He said, "Mr. Carker, Mr. Carker, Mr. Päker." After the visit, for a day or two he enjoyed playing with the word until he could say, "Carker, Parker, papa." After that he constantly used the word "*papa*." His vocabulary increased very rapidly in one month at this period."

This period is also illustrated by such nonsense chants as the following, made up by a girl of three years five months:

"Oh Lillian, little Lillian,
Ah, woe-wah, little Lillian;
Willie-lung, willie-lee,
Willie-lung,—I—lee."

"Come-en-no,
Come-en-jo,
Comen-la-li-lo" (repeated three or four times).

Another song parodied from "Old King Cole" is:—

"He called for his jo,
And he called for his ji,
And he didn't know what to do."

This is the period when the Mother Goose melodies are first appreciated: sense gives way to sound, and jingles and rhymes are listened to and repeated with keen delight or improvised with surprising readiness.

"B. plays with words," writes a mother, "using great variety of pitch and inflection, making, for instance, the word '*mamma*' express all sorts of feelings, from the deepest affection to the most nonsensical caricature of the word."

If the first period, at about a year or a year and a half of

age, is regarded as a nascent period for speech, the second beginning at about the age of three years, just after speech has been acquired, will probably be found to be one of the nascent periods for singing. A considerable number of returns, together with the expressed opinion and experience of a large number of singing teachers point that way. Dr. Hartwell's report on stuttering in the Boston schools (1894) shows a great rise in the percentage of stutterers at the very first entrance on regular school work in the lowest primary grade, and he is therefore very emphatic in the demand for much better oral drill and phonic training before taking up reading and writing. Otherwise the schools are likely to continue to deserve the appellation of "nurseries of stuttering," bestowed on them by A. Melville Bell. In the case of Preyer's boy, the sense of rhythm, which began to develop prominently at about two years of age, and probably led to his fit of counting, later by the end of his third year gave him great pleasure in singing, and blossomed out into nonsense melodies, echolalia, and logorrhœa in the fourth year. As Prof. Sully has suggested the name of "la-la period" for the earlier time of nonsense babbling, we might perhaps christen the later one of nonsense chants and rhymes the "tra-la-la period."

II. *Motor.* Assimilation and attraction seem to me to have so much to do with reduplication that I shall treat them together. When the organs are in position for a sound, they naturally will tend to repeat that sound or its cognate. Philology is of course well acquainted with these phenomena, *e. g.*, *n* has become *ng* in *anger*, *congress*, *uncle*, *ink*, etc. *D* at the end of a syllable after a surd becomes *t*, after a sonant it remains as *d*. Examples of attraction in children's words are: *Laly* (lady), *daitipf* (bleistift), *paput* (caput), *ging-gong-bell* (ding-dong-bell), *ghark* (dark), *bamp* (bank), *di-down* (sit down), *kick* (thick), *canky* (candy), *lightleen* (lightning), etc.

A little girl of eighteen months sang over and over to herself the words "*how di do*" (how do you do) one morning as she lay in bed. It soon became "*dow-di-doo*," however, and finally "*dowdōō*."

Reduplications are numerous: *Tittit* (stiefel), *tettet* (kette), *Dodo* (Dorchen), *kogglegoo* (kangaroo), *baba* (blanket), *bi-ke-ke-ke* (bicycle), *ni-ni* (nice), *boom-boom* (book), etc.

Metathesis occurs over and over again. "In trying to say a new word of more than one syllable, Renné (three years eight months) often says it backward, pronouncing the last syllable first. His utterance is jerky, and he has to stop and think forward." Examples: *Grefessen* (gefressen), *its* (ist),

tōts (toast), *shetsnuts* (chestnuts), *lotsit* (lost it), *mlik* (milk), *medniss* (medicine), *bastik* (basket), *eblow* (elbow), *tockary* (crocodile), *bloofildool* (beautiful), *Germina* (Germany),*carker* (cracker), *pooplick* (pulpit), *du bitz* (du bist), *wiloine* (Ger. violine), *aristrocrate* (Fr. aristocrate), *ample* (lamp), etc.

Adults make slips of the tongue exactly analogous to all of the foregoing mistakes of the child. Meringer and Mayer[1] in Germany have collected long lists of *lapsi linguæ* made in speaking and reading. Their observations are confined for the most part to lecturers, students and other adults,very few notes on children being included. The authors classified their material under the heads of (1) Transposition (metathesis), (2) Anticipation (presonant), (3) Postposition (postsonant), (4) Contamination, (5) Substitution, (6) Dissimilation and assimilation.

All cases that come under any of the above heads (beginning or ending clipped, syncope, prefix or suffix added, sounds inserted to fill out syllables, confusion or contamination with other words, assimilation, attraction, reduplication, dissimilation, and metathesis) are excluded from the following study of the development of the motor ability of the tongue to distinguish and assume with precision the different positions necessary in forming the linguals. Furthermore I have taken only cases of initial consonants, since none others receive such uniform attention from the child.

I wish to make one observation on the labials *b*, *m*, *p* before taking up the linguals. It is usual to speak of the labials as formed by the lips, and so they are ; but they are usually formed both by children and adults, with no adjustment of the lip-muscles. The mouth is opened and shut by the large jaw muscles (masseters), and the lips take scarcely more part in the formation of *b*, *m*, *p* than a couple of flaps of India rubber would. The other labials, *f*, *v*, *w* (rounded), do require more or less precise adjustment of the lips, and are correspondingly late in appearing.

In the accompanying table of initial sounds, I have put down all the mispronunciations of initial consonants or consonant combinations that I have thus far been able to collect (counting about 600), selected by excluding all the cases otherwise explained above. The few cases of mispronunciation of *t*, *d*, *b*, *p*, *m*, *n*, *z*, are omitted, since they are all reducible to cognate substitution, or else are straggling irregu-

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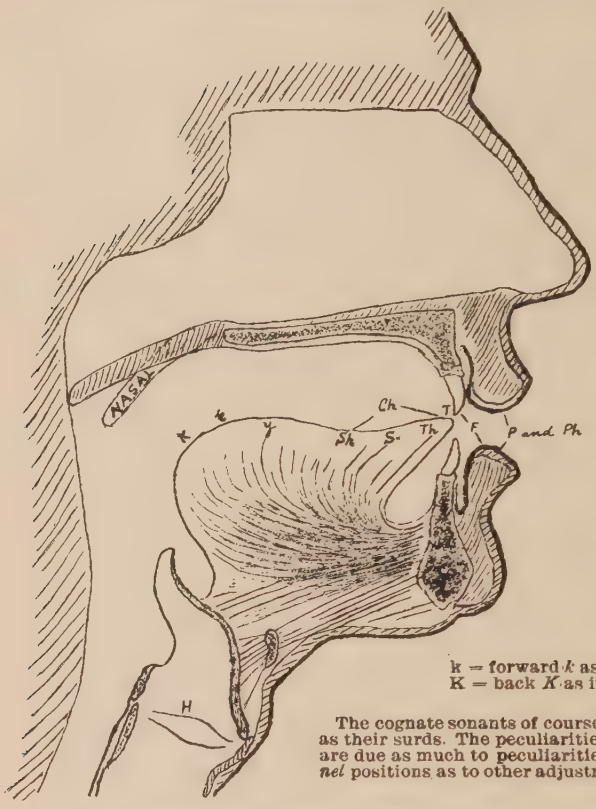
[1] *Versprechen und Verlesen.* Eine psychologisch-linguistische Studie von Dr. Rudolf Meringer und Dr. Karl Mayer. Stuttgart, 1895.

larities to which no importance can be attached. The whole mass of mispronunciations of all sorts on which my observations are based, amounts to about fifteen hundred. I desire very much to increase it, and solicit notes from all who are willing to contribute. (Age, sex, nationality of child, and phrases illustrating the use of the words should be given.) Where the age was not given in the notes already sent in, the mispronunciation will be found in the left hand column just after the correct sound. Each instance in the table represents anywhere from one to a dozen or more reported cases. When the table has been made completer, it is hoped that it will show something of the genesis and development of the sounds. A study of the table suggested to me the possibility of tracing the progress of differentiation of sounds, beginning when only *one position* of the tongue (omitting for the present all consideration of the vowels) is definitely located and distinguished, and proceeding to the discrimination of two sounds, and then three, and so on upward. The following drawing and table will serve to illustrate the idea. Of course before it can really be worked out, the positions of the tongue in making the vowel sounds would have to be taken into consideration. Data for the development of these so far as they are at hand, are not yet sufficient in quantity or accuracy. It would probably require the work of trained phoneticians to collect such material. Another point that would have to be considered is, which of the sounds develop as medials or finals before appearing as initials.

The prominent part played by *t* is strongly brought out in these tables. That accuracy and precision of movement should develop first in the very tip of the tongue is probably owing to (1) its mobility, (2) its use as an organ of touch, and (3) the influence of teething by attracting the tongue to feel along the edges of the gums where the incisors are coming through. These influences give to *t* a lead at the very start, and this results in what may be called the "*t*-habit" of pronunciation.[1] *T* is substituted for *s*, *sh*, *sk*, *sl*, *st*, *ch*, *k*, *th*, *kl*, *sl*, *kr*, *str*, *tr*, and *thr* (see table of mispronunciations). The only other sound that has such wide range of vicarious use is *h*. Some even maintain that all the consonants develop out of *h*, and are but modifications of it.

[1] Compare the "*s*-habit," "*k*-habit," "*ah*-habit," "*yah*-habit," and "*v*-habit" in the pathological cases reported by physicians under the name of idioglossia. *Journal of Mental Science*, January, 1889; January, 1891; *Lancet*, 1891, I-601; L. E. Warren in *Defective Speech and Deafness*. The common cases of rotacism, lambdacism, sigmatism, and gammacism are also similar. Consult J. Wyllie on *The Disorders of Speech*. Edinburgh, 1894.

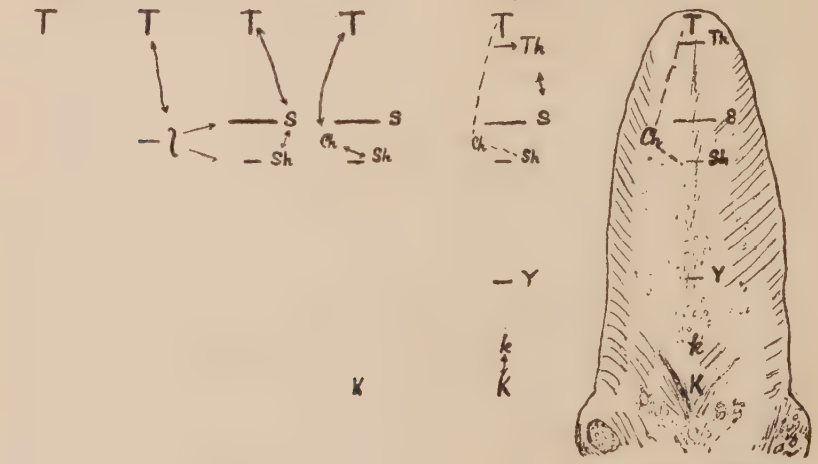


k = forward *k* as in *keep*.
K = back *K* as in *coop*.

The cognate sonants of course have the same positions as their surds. The peculiarities of the different sounds are due as much to peculiarities in *marginal* and *channel* positions as to other adjustments.

PROGRESS FROM COARSE TO FINE ADJUSTMENT.

[<——> when placed between sounds indicates that these sounds are in process of differentiation.]



Positions of the tongue distinguished.

When the child makes an extra effort to pronounce almost any initial sound, it may turn into an *h*. *H* is used for such heterogeneous sounds as *s*, *sh*, *sl*, *sn*, *f*, *w*, *wh*, *th*, *l*, *fl*, *r*, and *kr*.

A little child's normal mispronunciation is rather an indistinctness or vagueness of utterance than an out-and-out substitution of a wrong sound for a right one. As an inexpert marksman in aiming at the bull's-eye, is likely to shoot all around the target, but may by chance occasionally hit the mark exactly, so the child makes sounds that have all degrees of approximation to the correct sound, and occasionally happens to hit exactly the right adjustment of parts long before his voluntary muscular control makes him a sure shot in articulation. Perhaps we may say that so long as the sounds made by the child retain this plastic vagueness, there is but little cause for anxiety as to his pronunciation, but so soon as you notice distinctness and fixed regularity in his utterance, you may know that habits are then receiving their set, and it is time to be concerned if he still retains any inaccuracies or wrong sounds.

The differentiation of sounds can be studied best, one would think, by a comparison of the different stages of the same word in its development. Quite a number of these have been sent in, and I hope to receive enough more to be able to make something out of them. A few examples are as follows: *Itte*, *ittle*, *lille*, *little; babichse*, *spabichse*, *spassbüchse*, *sparzbüchse*, *sparbüchse; kaffom*, *kaftoffeln*, *kartoffeln; Addie*, *Att*, *Attie*, *Annie*, *Auntie; ēdu*, *ētu*, *ittle*, *littte; hō*, *os*, *hos*, *horse*.

The Development of the Sentence.

It is well known that children, in the latter part of the first year and first part of the second year, often use single words to express their thoughts, *e. g.*, little Deborah, aged eleven months twenty-three days, comments on things she is interested in by saying, "*Pretta!*" (=Those things are pretty). She says "*Pretta!*" also on looking toward the window where she wants to be carried. At seventeen months she expresses her desire to be taken up in the arms, by saying "Up!" and lifting her arms. She says "*Me!*" to mean "Give me that." Elsa (seventeen months) simply says "*Dow!*" when she wants to get down from her chair. A— at twenty months said "*Haw! haw!*" and his aunt understood him to mean a horse was going by,—but he corrected her by curtsying (which he used as a gesture of request), and saying "*Haw!*" at the same time, meaning "I want to ride to

Banbury Cross." Hilda (twenty-three months) says "*Pieces!*" and means "Cut that into pieces." Such instances might of course be multiplied indefinitely.

The same word may mean very different things, according to its use. Inflection, tone and gesture are everything to the child; "*Burr!*" means "That is too hot" or "It burnt me;" but "*Burr?*" indicates uncertainty, "Will that burn me?" So "*Take!*" is quite another thing from "*Take?*" The former means "Please pick me up"; the latter asks "May I have that?" Preyer counted eleven such meanings of the German "*atta*" (all gone) as used by his boy in the first two years, and nowhere near exhausted the list.

Such words are undifferentiated sentence-words, and are similar to such use of exclamations as "*Fire!*" or "*Thief!*" There is no grammar to such expressions, since grammar has to do with the relation of different words to each other, and here there is only one word. Language would mislead us badly if we were hence to conclude that the little child in using such expressions does not really have a true judgment in consciousness. To classify such child-words by the adult distinctions of parts of speech and say that these children above quoted used the adverb "*up*," the pronoun "*me*," the noun "*horse*," etc., but had not yet begun to use verbs, is of course simply to be misled by very superficial considerations. It does not seem possible to classify a child's words until he uses all of the parts of speech; unless, indeed, we are to follow Dewey in speaking of them as "nominal-adjectival-verbal" ("bottle!"), verbal-adjectival-nominal" ("door!"), "nominal-adjectival-verbal-interjectional complex," etc., etc. The fact that "up" is more of a verb than it is of an adverb in such cases, is shown by the use made of it by a much older child (fourteen years) in describing the movements of the amœba which she had seen under the microscope. "It *ups* out its false feet," she said, "and pulls its body after it."

The undifferentiated character of these expressions explains why children later so easily turn such words into any part of speech *ad libitum*. Hence they call an ax "*a chop*," the throat, "*the choke*," a hammer, "*a pound*," etc. They say, "The hurt *blooded*" (=bled), "Can I be *sorried*" (=forgiven), etc. A little girl of three years nine months, seeing me kill a fly, asked, "What is the reason you want to *dead* that fly?" Then trying to correct herself, she said, "to *die* that fly,—to make it dead."

"Mother," said a little girl of three years ten months, "do you remember once we saw a *hand-organ* man and he was *hand-organing*, and he had a live monkey?"

I remarked to a little girl, "Bessie (dolly) is better behaved than she used to be." "*Which used-to-be?*" she returned, *i. e.*, "When do you mean?"

That most grown people are also free enough from the thraldom of the grammarians to use words occasionally with a like freedom, is of course fortunately true.

That which the grammarians tell us is the most essential thing in the sentence, viz., the copula, which really makes one part a predicate and the other part a subject, is comparatively late in developing as a distinct word. Of course it is present in the child's thought perhaps, but it has not as pressing need of expression in words as the other parts have. It frequently comes out in the contrast, emphasis, intonation, and especially by gestures. Otis (17½ months) begs, "*Pwee ow*" (=Please draw me an owl); "*Pwee Opee paba*" (=Please let me see Otis' and papa's pictures). Hilda at twenty-three months says, "*Mamma no cake, more cake*" (=Mamma has no cake, take some); "*Papa, pin*" (=Papa, give me a pin); "*Aunty, down stairs!*" (=Aunty, go down stairs); "*Butter, toast*" (=Put some butter on my toast). Florence (twenty-eight months) says, "*Nancy seep*" (=Nancy is asleep); "*Bekus weddy*" (=Breakfast is ready); "*Torry, no!*" (=Don't tell me a story). Preyer's boy used his first sentence of two words in his twenty-fourth month, "*Haim mimi*" (=I want to go home and drink milk). Preyer also reports Axel's first spoken judgment as being made in the twenty-third month. This can scarcely be correct, as he was saying "*Atta*," "*Dakku*," etc., from the fourteenth month. Except when a child is simply repeating words without meaning, it seems to me his words are always sentences. So also the statement that Axel asked the first spontaneous question in his twenty-eighth month, is equally misleading. It seems that Preyer means by this that Axel did not use *interrogative words*, such as "Where?" "When?" etc., earlier. Questions, however, come much earlier, indeed almost as soon as words are used at all.

Comparing the above examples, one must be struck with the fact that in every case it is rather the psychological moment of prominence in thought than the logical element of grammatical importance in the sentence that decides of what and how the sentence shall be composed. The striking, the distinct, the accented parts of a sentence are more likely to appear first than are the logically primitive and simple elements. Compare the following: "*Ea, papa*" (=Here papa, take this, papa); "*Up, please, dada;*" "*Cuppy please play with;*" "*Forky dada say no—spoon may*" (Pollock); "*Red-green! Upstairs! Find!*" (=I will run upstairs and

find red-green among the colors. Miss Shinn's niece). "*Harold cry—no!*" (=Harold will not cry. Mr. Dawson's little boy of three years six months).

Indeed the word is no more the unit in building up the sentence than the *phrase* is. The little one has been hearing phrases and sentences all his life, and, in many cases, does not recognize that these are composed of separate words. Thus Preyer's boy at twenty-seven months was using the phrases "*magenicht*" (=mag-es-nicht) and "*tannenicht*" (=kann-er-nicht) as if they were single words. Such phrases as "nice and clean," "all gone," "all right" are heard and accepted as units without further analysis. So likewise "I'm" is not recognized as composed of *I* and *am*, nor "*don't* of *do* and *not*. In answer to the question, "Are you going?" one child says "*I'm are.*" Another says "*Dō whistle*" (=don't whistle), thus leaving out the *nt* of the *not* entirely and never once noticing it.

The parts of the sentence tend to run together and the accented word becomes the accented syllable of the compound. Then all the rules, which we have discussed above under the mutilation of words, apply. The beginning or, more commonly, the ending is clipped, and the unaccented particles, such as articles, pronouns and prepositions, drop out, because their individual force is not recognized. This is the case with many phrases outside of infant philology, *e. g.*, "It may be that," etc., has shortened down to "*mebbe.*"

Accordingly, adverbs, prepositions and pronouns frequently make their appearance as enclitics, and sometimes as inseparable enclitics or real suffixes. Thus Hilda (twenty-three months) says "*Openit door*," "*Openit soap*" (=Get the soap off the place it is stuck to), etc.; "*Papa t'off coat off*" (=Papa is taking his coat off). This "*it*" is added to various other words as a suffix and is not recognized in the sentence in its true light, *e. g.*, "*Shutit*," "*Tieit*," "*Putit*," etc. "*Cover broke-it, too bad*" (=It's too bad the cover broke) (Prof. Hempl).

Just as before, in tracing the development of the word, we saw the justification of the "word-method" of teaching children new words, so here we see the foundation of the "sentence-method," or better, perhaps, of the "phrase-method." In either case, the method rests on the fact that the child frequently at first recognizes and learns the word or phrase as a whole, without analyzing it into its elements. But why should such a method be continued after the child knows the elements? Is not the word-method out of place after the child has already learned, or ought to have learned, to distinguish syllables and single words? Why

should the pupils be delayed with the sentence-method when they already know the words composing the phrase? The word-method and the sentence-method are in place in oral language, but as soon as the child is old enough to learn his letters, the phonic and alphabet methods will yield him the best and most indispensable assistance, even as the invention of Cadmus proved such a priceless treasure in the history of the race.

Perhaps among the very last words to be used in the sentence, at least by some children, is the little word *is* and its inflected forms,—so important to the logicians. Hilda (twenty-three months) asks, "*Where pretty boy gone to?*" Ruth (thirty months) says, "*I looking at those white cherry blossoms.*" Paul (four years) says, "*When July comes, I going to be a big, big, heavy man.*" Of course there are individual differences, but the rule seems to be simply a matter of whether the word or its meaning attracts the attention, as necessary and yet inexpressible by tone, inflection of voice or gesture. As Romanes points out, these elements, especially gesture, were in the race development of language, the precursors of grammatical distinctions in words. For a while they take the place entirely of the verb, as a distinct word. The separation of subject and predicate is perfectly plain when the child says, "*Butter-toast*" or "*Mamma—no toast*," and expresses by gestures, tone, etc., his meaning. The following from a private letter is a good illustration of the part played by gesture in the development of the sentence. "My little girl (aged two years) does not form sentences yet, but makes us understand by a series of grunts and pointing to different objects. For something to eat, she points to an orange, says '*ball*,' and then opens her mouth. When she sees I understand that and take the orange, she will then run to where the little dish is kept that I fix it in for her, and then she points to her neck and gives another grunt, which means 'get a bib for her.' If she wants to eat it with a spoon, she will take the spoon and show what she wants. If she does not want the spoon, she lays it away and tries to show that she wants the orange cut up." She is very imitative of everything she sees others do, and knows and understands the names of all familiar objects.

The following is an instance of pantomime indulged in by a little girl of three years five months, who is also a great little talker. I quote the mother's words: "She stood before me, empty-handed, and said, 'Mamma, I'm little Jack Horner.' Then she crooked her forefinger and thumb, and dipping downward into an imaginary pie, held up her hand,

triumphantly shouting 'Plum.' This was the only word she said, and the action told the whole tale."

A considerable number of returns refer to the love of acting in children of this age. A little girl of four dramatizes scenes from her favorite stories, sometimes having to assume herself successively each of the characters. One mother writes of her boy (two years nine months): "Love of acting developed suddenly, and since then, the child has personated some one different every day. The whole family is made to accord with his whim for the day, and he is very consistent, never forgetting his part." On a visit to his cousin once, he assigned parts to all present and kept up his assumed character, till at night he seemed absolutely exhausted from his continued exertion to be consistent. As a very young child he used to take the poses of children in his picture books.

The last words, therefore,to come into use are by no means necessarily those whose use is most difficult to understand, as some writers simply take for granted to be the case. The last words to be introduced into a child's sentences are rather those that he feels the *least need of*,—those, in other words, that can be supplied from the context or by gesture and tone. Thus the interrogatives and relatives come late. Their place is taken by accent, look and gesture. The prepositional function is left to be guessed from the juxtaposition. Pronouns, of course, follow much later than nouns, because they can always be dispensed with.

In all of this the child's use of proper forms is no doubt much retarded by the too ready understanding and satisfaction of his desires by his parents and elders, without insisting on his taking pains always to do his best.

How expressive some of these concentrated sentences may be, with all the prepositions, conjunctions, and verb "to be" omitted, is well known. "*Cab's dati, clam clin*" (=Cab's dirty, perambulator clean. Pollock's girl at 21½ months). Lillian (thirty-four months) came running up to me and said, "*Door locked; come, find key.*" A. W. C. (twenty-one months), when he wanted to go out for a walk, simply said "*Get—go*" (=Get your things and let's go for a walk). The same youngster shortened up a demonstrational experiment in physics into this laconic form : he simply struck a glass tumbler with a silver knife and then said "*beh!*" (=bell). The following would have done credit to any young hopeful in the most glorious days of Sparta : "His brother sat on his stool. He stamped on the floor saying, '*No—mine—go.*' His brother left and he sat down and clapped his hands and laughed at the success of his com-

mand." (Miss White's report on an American boy of two years of age.) Perhaps the most exciting story told by a twenty-six months old boy is the following reported by Miss Wiltse: "Three weeks after visiting Ipswich he tried to tell his mother something—and said over and over, '*Tāká bādy, hoppy hoppy, tāka bādy, mama, gass, tāka bādy hoppy gass tsan!*' getting excited because she did not understand, but wild with delight when she interpreted—'Oh, yes, the baby took a grasshopper out of the sand.'" This example illustrates very strikingly the fact that to the child at this stage, the order of the words is nothing. He wants to say it *all at once* anyhow, just as he thinks it all at once.

The sensory element, however, still further modifies all that was said above about the last words the child uses. He will of course not continue to omit prominent words or syllables after he has begun to notice them in the speech of others. Hence the last words to come into use will necessarily be the smaller particles that get slurred over in adult speech and become more or less mere enclitics or proclitics. Accuracy in the use of these little words, articles, prepositions, and some of the adverbs, will usually be found to keep pace with the accuracy in pronunciation of the separate words. As long as single words are clipped, sentences are likely to be clipped.

Extension of meaning and use of metaphors by children have been dwelt on at length by various writers. Specialization of meaning is commoner still, but attracts less notice, because it is seldom a mistake, whereas nearly every extension of meaning is a mistake that attracts the attention of the observer. Every concrete application is a specialization, and in early childhood such names as "home," "yard," "washhouse," "tool-chest," "big closet," etc., etc., acquire such an individual application that the limitation stays by them much later in life. At all ages the human mind works in both directions, extending the meaning of words and rising to higher and higher concepts, and on the other hand discriminating in the use of words and descending to finer and finer distinctions. Grown people show morbid extremes as well as children. Take such examples from current pedagogical literature as the words "apperception," "imitation," "individualism" and "interest" afford. Some people, on the other extreme, "move in a realm of definitions," and can never do anything till they have made out a parcel of technical meanings. By that time all their virtue has gone out of them.

When a child looking in an aquarium asks, "What are those?" he may be answered, "They are fish," or, "They are

Japanese Fantails." Which is the correct answer to make depends on what the child's question means. If you answer "Fish," he may afterward think that all "fish" have fantails, and simply because you have given him the wrong word, which does not correspond to those characteristics which he has just observed. On the other hand Ireland tells of a child who saw a salmon and learned its name. After this he called all fishes "salmons," and then sugar fishes, and finally all sweetmeats became "salmons." He observed and noted the characteristics of the class fishes, but was given the more special name "salmon." Is this not as much the fault of the grown people who answered the child's question in an inappreciative way and gave him the wrong word?

A great many other interesting matters have been brought out by the observation notes that correspondents have sent in, such as the use of auxiliaries, growth of inflection in the noun, verb and adjective, learning of idioms and phrases, puns and conundrums of children, the "tra-la-la" period with its echolalia, logorrhœa and development of music, the child's first ways of thinking of books and printed and written matter, the quaint and curious forms he sees in the letters and his delight in recognizing them, his picture-writing, etc. But these and the whole subject of secret and original child-languages on which also I have been collecting all the data within reach, as well as the comparison with the racial development, and a further study of aphasia, will be left for a succeeding report.

In conclusion I wish to thank most heartily one and all of my correspondents for their generous assistance, and in particular Prof. George Hempl for his suggestions and advice as well as many of the most careful notes on mispronunciation. I hope that all who have contributed will be encouraged and interested to continue, and that other parents and teachers will join them. Without hearty coöperation of this kind no satisfactory work can be done. This report is made now more for the purpose of interesting others to assist by sending in notes, than it is with any idea of being complete in any of its parts. Syllabi, questionnaires and information may be had by addressing the author, care of Clark University, Worcester, Mass.

CANADIAN NORMAL SCHOOLS.

S. B. Sinclair, Ottawa, Canada.

An important condition of the British North American Act of 1867, by which the various provinces were federated into the Dominion of Canada, was that "in and for each province the Legislature may exclusively make laws in relation to education." This clause was guarded by certain provisions granting remedial powers to the Dominion Government in extreme cases. With slight exception, however, thus far a policy of non-interference has been adopted by the Dominion government, and each province has evolved an educational system after its own liking and different from that obtaining in any other province. The Normal School being an outgrowth of the educational system has naturally, in each case, been largely conditioned by the educational requirements of the particular province in which it is situated, and accordingly there is no co-relation between the Normal Schools of the Dominion as a whole.

Certain common characteristics may be noted.

For a number of years the law in Ontario has been that no teacher be permitted to teach in a kindergarten, public or high school who has not taken at least four months of professional training, and the minimum time limit is now being increased. In other provinces where professional training is not yet compulsory, strenuous efforts are being made to increase the number of trained teachers. For example, in Nova Scotia a new feature was introduced two years ago by which a Normal School diploma qualifies for an advance in the class of license. A teacher holding a scholarship certificate of the first or highest class, but having no Normal School diploma, ranks as only a second class teacher, and so uniformly a teacher without Normal School diploma ranks one grade lower than the scholarship certificate indicates.

All the Canadian Normal Schools, with the exception of those in Quebec, are non-sectarian. Each school receives aid from the Provincial Government and has in connection

with it a kindergarten and a Model (or Practice) School, where the Normal School students observe and teach under criticism. Ontario has three classes of professional training schools, but with this exception all the definite professional training given in Canada is confined to Normal Schools proper. Ontario and Quebec, the two largest provinces, are so different in their national conditions as to place their respective schools at the opposite poles of the Dominion system. In Quebec six-sevenths of the inhabitants are Roman Catholics, and only one-seventh English. As a result the professional training schools of Quebec are sectarian and bilingual, while those of Ontario are non-sectarian and English. Speaking generally, the watchword of the Quebec system may be said to be Individuality, that of the Ontario system Unification.

In Quebec it has been considered better (at least until more high schools are established throughout the province) to have the Normal School work include not only professional studies, such as the history of education, but also definite courses in literary or academic studies, such as grammar and arithmetic.

These literary subjects are, however, treated from the professional standpoint in such a way as to exert an important influence upon the future treatment of the subject when the student comes to teach it.

Ontario.

In the Ontario educational system a distinct line of cleavage is drawn between literary and professional studies. The dual system has been abandoned and the Normal School work made almost entirely professional. The literary work has been relegated to the high school and university, and at the entrance to the professional training school, the student is required to present a certificate of having passed a provincial examination upon the literary subjects required for the grade of certificate for which he is a candidate. There are three grades of professional certificates in Ontario, called respectively third, second, and first class, with three corresponding grades of literary certificates, called respectively primary, junior leaving, and senior leaving certificates. The examinations for the latter three have now been merged into those of the Provincial University, with a minimum requirement of fifty per cent., so that it may be said that a primary certificate means junior matriculation into Toronto University without foreign languages, a junior certificate means full junior matriculation, and a senior certificate

means full senior matriculation, that is, examination at the end of first year at Toronto University.

There are four classes of professional training schools in Ontario, viz.: 1, Kindergarten training schools; 2, County Model Schools for Third Class Teachers; 3, Provincial Normal Schools for Second Class ; and 4, the School of Pedagogy for First Class, High School, and Collegiate Institute.

(*1*) *Kindergarten.* The full kindergarten training course extends over two years. The first year is taken at local schools. At its termination successful students receive a kindergarten assistant's certificate. There were forty-nine of these certificates granted in 1894. The second year's training, which qualifies for a director's certificate, is taken at the Toronto and Ottawa Normal Schools, under the supervision of Miss Macintyre and Miss Bolton respectively. There were thirty-six directors' certificates granted in 1894.

(*2*) *County Model Schools.* There are fifty-nine County Model Schools. Each school receives an annual grant of $150 from the county in which it is situated. The length of the term is four months, and the certificate granted is good for three years. Students at entrance must hold primary certificates and be over eighteen years of age. There were 1,750 students in attendance at these schools last year.

County Model Schools were established in 1877 under the inspection of G. W. Ross, M. P. (now the Honorable the Minister of Education), and the present inspector, J. J. Tilley, Esq.

(*3*) *Provincial Normal Schools.* There are two Provincial Normal Schools in Ontario, situated at Toronto and Ottawa respectively. The Toronto School was founded 1846, with J. T. Robinson, M. A., as Principal. The present Principal is T. Kirkland, M. A., appointed 1884.

The Ottawa School was established in 1875 with the present Principal, J. A. MacCabe, LL. D., at its head.

Both schools are under the administration of the Honorable the Minister of Education, who is a member of the Ontario Government. The annual Provincial Government grant to each school is about twenty-five thousand dollars, and the schools are conducted as nearly as practicable along the same lines. The minimum qualification standard required for entrance is a junior leaving certificate, a third class professional certificate, and one year's successful experience as public school teacher. There is also an entrance examination on the science and history of education. The length of the term is five months. At the end of the term successful students are granted second class professional certificates, valid anywhere in the Province, and for life. The total attendance at the

schools last year was 379, of whom 113 were male and 266 female students.

(4) *The School of Pedagogy.* The School of Pedagogy is situated in Toronto. It was established in 1890 under the management of the present Principal, J. A. McLellan, LL. D. It receives an annual grant of about $7,000 from the Provincial Government. Its administration is the same as that of the Normal School. The standard for entrance is senior leaving certificate or a degree in arts. The course extends over a year of eight months. On graduation the student receives a Provincial first class professional certificate, valid in any high school or collegiate institute in the Province. Last year the attendance was 107, of whom 67 were male and 40 female students. Fifty-six were university graduates. Of the graduates in arts of the University of Toronto in 1895, there are now attending the School of Pedagogy three of the six highest honor men in classics, two of the four highest honor men in mathematics, three of the five highest honor men in physics, four of the seven highest honor men in English, and six of the nine highest honor men in moderns.

Some changes are proposed with a view to more thoroughly relating and differentiating these three classes of Ontario schools. It is probable that both the Model and the Normal School terms will be lengthened and the Normal School student will not be required to furnish a third class professional certificate at entrance.

QUEBEC.

In the Province of Quebec there are three Normal Schools, one (McGill) being Protestant, and two (Jacques Cartier and Laval) Roman Catholic.

McGill Normal School. The McGill Normal School was established by the government of the then united provinces of Upper and Lower Canada, in the year 1857, in the city of Montreal, to provide for the training of teachers for the Protestant schools of Lower Canada. The direction of the school was committed to the Superintendent of Education, the Hon. P. J. O. Chauveau, and the authorities of McGill College, jointly. Since confederation the school has been maintained by an annual grant from the Legislature of the Province of Quebec. It is now under the control of the Protestant Committee of the Council of Public Instruction of Quebec, which, however, commits its immediate administration to the Superintendent of Public Instruction, and to a committee chosen by the corporation chosen by the McGill Univer-

sity. The school is thus kept closely in touch with and receives valuable assistance from McGill University. The government revenue is increased by a grant of $3,000 from Montreal Protestant Board School Commissioners, making a total of about $17,000 per annum. Sewing, modeling in clay, and cooking are taught, and a workshop is maintained in connection with the school.

The full Normal School course extends over two years of nine months each. At the end of the first year, successful students are granted an Elementary School diploma, and at the end of the second year, a Model School diploma. The majority of the students take the two years' course. The literary qualification demanded at the end of the two full years' course is almost exactly equivalent to that of matriculation into McGill University, and with a certain specified standard is accepted by that university as matriculation *pro tanto* The literary qualification demanded for entrance to the Normal School may be said to be slightly inferior to that of a student who, with a year's study, could take McGill matriculation. Last year there were 11 male and 156 female students in attendance.

There is also in connection with McGill Normal School a short course in pedagogy for what is called the Academy diploma. It consists of forty lectures and forty half days' teaching in the Practice School. For entrance to this course students must be either university graduates, or undergraduates of two years' standing holding the Model School diploma previously described. Last year 10 male and 14 female graduates of McGill University took this course. In 1894 McGill Normal School granted 7 Academy diplomas, 40 Model School, and 48 Elementary School diplomas.

Jacques Cartier and Laval Normal Schools. The Jacques Cartier Normal School in Montreal and the Laval Normal School in Quebec were originated in 1857 for the purpose of training teachers for the Roman Catholic Schools. The present Principal of the former school, the Rev. H. A. B. Verreau, was appointed in 1857. The first Principal of the other school was the Rev. E. Horan, also appointed in 1857. The present Principal is Rev. T. G. Roleau, appointed 1888. In common with McGill these schools receive each a government grant of $15,000 per annum. Laval receives students of both sexes, and Jacques Cartier male students only. In both schools the students are in residence.

"Every candidate at entrance must undergo an examination before the Principal as to his sufficient knowledge of reading, writing, the rudiments of grammar in his own language, arithmetic to proportion inclusive, the rudiments of

geography, and the shorter catechism." The course of study extends over three years, and is such that students may obtain an Elementary diploma at the end of the first year, a Model School diploma at the end of the second year, and an Academy diploma at the end of the third year. In 1894 the attendance at Laval was 48 male and 61 female students; of these 7 received Academy diplomas, 57 Model School, and 30 Elementary diplomas. The attendance at Jacques Cartier was 55 students, of whom 4 received Academy diplomas, 11 Model School, and 6 Elementary School diplomas.

Nova Scotia.

The Provincial Normal School of Nova Scotia was opened at Truro in 1855, with Rev. Alexander Forrester, D. D., as Principal. He was succeeded in 1869 by the present Principal, John P. Calkin, M. A. The school receives an annual grant of $8,000 from the Provincial Government. It is affiliated with the Provincial School of Agriculture for the purpose of securing to the Normal School students practical instruction in the biological sciences. There is in connection with the Normal School a manual training room fitted with model work benches, sets of wood working tools and drawing-boards. The work of the Normal School course resembles that in the Ontario schools in that it is almost entirely professional, and that literary examination certificates are demanded at entrance to the Normal School. Students are ranked in senior, intermediate, and junior classes, according to their respective literary qualifications. The full course extends over one year of eight and one half months, but the minimum time of attendance required of students depends on their qualifications on entering the institution and on the rank of diploma for which they are candidates. As a rule candidates for first or highest rank diploma are required to attend the full year of eight and one half months, those for second rank five months, and those for third rank three months, but a shorter period of attendance is granted in special cases. In 1894 the total attendance was 130, of whom 8 were college graduates; 123 diplomas were awarded, of which 53 were of the first rank, 56 of the second rank, and 14 of the third rank.

New Brunswick.

The Provincial Normal School of New Brunswick is situated at Fredericton. It was founded in 1848, with J. Marshall D'Avray as Principal. Eldon Mullin, M. A., is the present Principal of the school. The Provincial grant in 1894 was $5,741.69.

The length of the course and the subjects prescribed correspond somewhat closely to those of the Truro school.

In 1894 there were 394 students enrolled, of whom 35 were in the senior division, 258 in the junior division and 27 in the French department. Of these 68 were granted first class license certificates, 129 second class, and 117 third class.

Prince Edward Island.

Teachers in the Province of Prince Edward Island are trained at the Prince of Wales College and Provincial Normal School, which was established at Charlottetown as a united institution in 1879, under the control of the present Principal, Alex. Anderson, LL.D.

The annual government grant to the combined institution is about $5,000. In 1893 there were granted 7 Honor diplomas, 7 first class ordinary diplomas, 4 second class ordinary diplomas, and 10 third class diplomas.

Manitoba.

The Manitoba school system resembles the Ontario system, but is on a less elaborate scale. Third class teachers receive a ten weeks' training at the hands of county inspectors in "local Normal Schools." Last year 120 teachers received this training. First and second class teachers are trained in the Provincial Normal School.

The Manitoba Provincial Normal School was established at Winnipeg in 1882. The first Principal was Mr. L. E. Byington. The present Principal is Mr. W. A. McIntyre, M. A., appointed in 1892. The school is under the direct control of the Provincial Government, from which it receives an annual grant of about $5000. The term extends over six months. Last year the attendance was 42 male and 52 female students.

Northwest Territories.

Persons desiring to qualify as teachers in the Northwest Territories are required to pass a non-professional examination and undergo training in a Normal School. The standards of literary qualification and professional training are similar to those in force in Manitoba and Ontario. Local training schools were established in 1890. By the ordinance of 1892 training was made compulsory.

Persons who have obtained third class non-professional certificates are trained at local centres for ten weeks by the territorial inspectors.

Candidates who hold non-professional certificates of the first or second class are trained in the Territorial Normal School.

This school was established at Regina in 1893 under the direction of Mr. D. J. Goggin, M. A., Superintendent of Education. The term for each class is four months. The course includes a study of the science, art and history of education, with practice in teaching under supervision. Permanent certificates are not issued till teachers have received a satisfactory report from an inspector, after having taught one year on an interim certificate.

British Columbia has as yet no Normal School, but it is proposed to establish one at an early date.

The study of the educational history of Canada reveals the fact that in each province the proportion of trained teachers has steadily increased, and that there is a growing public sentiment in favor of the ideal that every teacher in every school should have a certain quantum of professional training.

EFFECT OF HIGH SCHOOL WORK UPON GIRLS DURING ADOLESCENCE.

By Helen P. Kennedy, M. D.

Perhaps the problem of sex in education will always provoke discussion. But complete and scientific knowledge of the phenomena attending menstruation will aid in deciding whether girls suffer harm in gaining a higher education.

Great intellectual demands are made upon young girls at the time nature is developing the female organism. The whole nature of the girl at puberty is undergoing a change that will fit her for womanhood and possible motherhood. The importance of the perfection in development of the female generative organs cannot be overestimated, and every care should be taken to insure the completion of the process. If the present system of education interferes with this process, then a better system should be devised. If the system as it is, inflicts no harm, then we must look to other causes for the existing ill health of American girls. Till we know the present state of health of school-girls, we cannot be sure that the educational system is at fault, and therefore cannot demand its improvement. Knowledge of the matter can be gained only by collecting data and comparing statistics. These must be numerous before logical deductions can be made As no one person has the opportunity of personally observing very many school-girls, data should be recorded whenever possible, and in time by comparison and compilation a scientific end can be reached. It was with this end in view that the following data were collected. From the general ignorance among the class of women who are usually questioned on this subject, little reliance can be placed upon the information obtained. On the contrary these questions were submitted to girls in a high school, most of whom had a fair knowledge of physiology, which enabled them to give reliable information.

The total number questioned was one hundred and twenty-nine. Of these four had not yet menstruated, reducing the available number to one hundred and twenty-five. To these the following questions were submitted:

1. What is your present age; nationality; age at which menstruation began?
2. Was the first period painful?
3. Were you in the high school at that time?
4. How often do you menstruate?
5. Has it appeared regularly from the first period?
6. How long does menstruation last?
7. What is the character of the flow?
8. Do you suffer pain, severe or slight?

9. If so, when is pain felt, and how long does it last?
10. Do you feel any premonitory symptoms of the onset of menstruation?
11. Are there any other disturbances during the period?
12. What effect has school life had?
13. How many napkins do you wear?
14. Do you ever wear corsets?
15. Are they uncomfortable during the period?
16. Do you take any medicine? What?
17. For what purpose is medicine taken?
18. Has it become a habit?
19. Have you received instruction from your mother or talked freely with her on this matter?
20. What is your habit of bathing during the menstrual week?
21. Do you ever dance or take other violent exercise during this period?

The answers are given in detail in the tables appended, but a brief summary may serve to emphasize some points.

The average age of the girls attending the high school was seventeen and eleven and one-half hundredths (17.11½) years, menstruation appearing at thirteen and seventy-two hundredths (13.72) years of age. This is nearly a year younger than the age given by Playfair, Lusk and other obstetricians. But these girls were subjected to the influence of city life from birth, and it only confirms the statement that the mode of life regulates largely the early establishment of menstruation, appearing earlier in girls living in cities than those living in the country.

The tables numbered two and eight have a bearing on the question whether painful menstruation (dysmenorrhœa) is physiological. Twenty-five reported that the first period was painful; twenty-four of these continued to suffer, while one was free from pain later. In ninety-seven cases the first menstrual period was painless, but seventy of the ninety-seven suffered later, leaving only twenty-seven who never felt pain at any time connected with menstruation. As to the cause of pain little can be satisfactorily demonstrated.

Assuming that a blood clot may act as a foreign body in the uterus, and cause painful uterine contractions, it was found that in forty cases the flow was clotted, but out of this number ten suffered severely, twenty-three slightly, and seven had no pain at all. Such varying results point to no definite cause. Relating to the time pain was felt, the greatest number (60) suffered during the first day or two; some (25) for a few hours or a day before the flow commenced; a few (4) at the cessation of the menses; and four during the whole period.

In one hundred and four cases, menstruation was established before entering the high school. Thirty-one had always been irregular in the reappearance of the menses, thirty-eight always regular, and to that number might be added forty-eight who were slightly irregular at first, but soon had the function regularly established, thus coming within physiological limits. Only four reported that any irregularity had developed since attending school. These four were of German parentage, and had been in the high school about two years. In all these cases the irregularity was with reference to time, sometimes coming on every three or four weeks, and again not till five or six weeks had passed. This variation had developed only shortly before the questions were submitted to the girls, and the general health showed no signs of weakness. No definite cause was apparen

in any one of the four cases, though many hypothetical ones suggest themselves according to the biased mind of the thinker. All of these girls had still a year or two before graduation, and under supervision time might develop the true reason for the irregularity that had just manifested itself.

About ninety-five per cent. menstruated every four weeks, only six cases showing any great deviation from the normal limits. One of these was probably an idiosyncrasy. The girl seemed in perfect health, had a fresh, ruddy complexion, and complained of no sort of indisposition. Menstruation was extremely irregular, appearing but two or three times a year, and lasting only a few hours or a day. The girl was not well developed physically, being short of stature and flat-chested. This lack of bodily development might be but a part of the incompleteness of growth that manifested itself in the irregular menstrual function.

Another of these cases was undoubtedly due to mental overwork during the senior year at school and the vacation following. Until her senior year this girl had been perfectly regular in the appearance of the menses; but during this year she made extra efforts in her studies to graduate, and also to fit herself to enter a higher educational institution. The catamenia soon showed the effect of mental excitement, becoming very irregular, and resisting all medical interference to establish the periods once more with regularity.

A third case showed the effect of heredity. The catamenia appeared without any warning, either of pain or discomfort, lasting four or five days, then disappearing for a year or more. The longest time intervening was fourteen months. Again it might come on in four weeks from the last period, thus showing extreme irregularity. The girl's health was of the best, and at no time did she feel any symptoms referable to a pathological condition of the sexual organs. She had menstruated for four years in this irregular way. Investigation showed that the same condition obtained in her mother before marriage, but bearing nine children established a permanent habit of menstruating every month.

The case reported as menstruating every two months is explained by the fact that at the time of questioning the flow had appeared but four times, which showed no greater irregularity than is physiological in the establishment of this function. One German girl gave six months as the interval between the catamenial periods. Again no cause but heredity could be found for this, as the girl was strong and well, and worked about the house in addition to moderate study. The last of the six cases showing irregularity was an American, and had been under the care of a physician for two years since the beginning of menstruation, and from great irregularity of months between the periods, finally only four weeks intervened. She stated that in accordance with the physician's advice, a teacher of calisthenics had been employed. Taking this judicious exercise was of more benefit than medication.

The answers to the eleventh question are of interest, as they show that neurotic disturbances predominate where any premonitory symptoms of the onset of the menstrual hemorrhage are felt. One-half (64) gave as an answer that there was no noticeable change in feeling or condition, while the rest complained of general indisposition and irritability, together with headache, backache, nausea, epistaxis, tenderness of the mammary glands, and slight inflammation of the sebaceous glands, especially of the face. There is undoubtedly some connection between the menstrual function and the system of sebaceous glands, though just

what connection has not as yet been demonstrated. It is quite common at puberty to find a girl's face almost repulsive from the pustular eruption covering it. But this grows better, and in time when menstruation is well established, often disappears. When there is any eruption, it is worse a few days before the catamenial flow sets in, and clears up during the intervening weeks. In some this sign is so well marked as to warn them of approaching menstruation.

It was hardly possible to state with certainty what effect the high school work had had upon these girls without weighing carefully every circumstance of the life they led out of school hours, and this it was impossible to do in every case. Taking their own estimate of the matter, ninety-two noticed no change whatever in their habit of menstruation; of the rest six stated that there was greater irregularity in the appearance of the period, twelve that there was more pain than at first, and twelve that the flow was more profuse. Strange as it may seem, three reported less pain and greater regularity. Still it is not just to infer from a case of increased pathological symptoms that school work is the sole cause. The social duties that school girls are allowed to assume are more probably the root of the evil. Again, if there are only slight variations from the normal condition, it is not of necessity pathological; as in many cases reported the function was just manifesting itself and was not fully established.

The amount of blood lost at each menstrual period has been estimated by physicians as an ounce to each napkin worn. But this method of calculation is far from scientific, as the number varies with the habits of cleanliness of each individual. According to this way of reckoning, two cases lost no blood at all, as they acknowledged that they did not wear any napkins, yet one reported the flow as profuse, lasting four days. It was found that on an average seven napkins to each menstrual period were used. This made the amount of blood lost rather more than is usually stated.

As might be expected among so many girls, the corset was worn by nearly all, only fourteen discarding it. Of the one hundred and eleven who wore corsets, twenty-four complained that their corsets were uncomfortable during the catamenial week. However no amount of positive discomfort seemed sufficient to induce them to change their mode of dress.

It is possible that the alcoholic or morphine habit might have originated with some women in early years when relief from painful menstruation was sought. Reference to the annexed tables will show that this is possible, though Jamaica ginger seemed to be a specific among the girls. As will be seen, little real medicine was taken, only two cases being under the care of a physician. These have already been spoken of. Girls are ready to take anything that a schoolmate may suggest to rid themselves of pain or to induce a feeling of warmth at such times, and are led even to take "cholera mixture" in hopes of finding relief. The remedies named in the tables are certainly not officinal, nor administered under the advice of a "regular practitioner."

Were this paper an appeal for reform in the education of girls, the remaining three questions would furnish ample material for strong remonstrance against the dangerous ignorance in which daughters are left by scarcely less ignorant mothers. Thirty-six girls in this high school passed into womanhood with no knowledge whatever, from a proper source, of all that makes them women! Thirty-nine were probably not much wiser, for they stated that they had received some instruction, but had not talked freely on

the matter. We are probably not far from right in assuming that the instruction given was most meagre. From the fact that the curious girl did not talk freely on what naturally interested her, it is possible she was put off with a few words as to personal care and a reprimand for her curiosity. Less than half of the girls felt free to talk with their mothers of this most important matter! This is almost criminal ignorance, and does not promise well for the next generation of daughters.

As a result of this ignorance, a false notion was entertained by many of the girls that no water should touch their persons during the catamenial week; so they abstained from even a local bath at a time when it was most needed.

The reckless way in which girls take violent exercise during the time of menstruation is shown in the twenty-first table. Half of them danced, rode horseback or skated, as if nothing unusual were the matter. For such violation of hygienic principles the mothers of these girls are directly responsible; and if they do not instruct their daughters, reason demands that a girl's school instruction shall include such a knowledge of herself as shall enable her to preserve her health by proper care.

Questions Submitted to the Girls of the High School.

I. What is your present age; nationality; age at which menstruation began?

	Number.	Average Age.	Age of first Menstruation.
American,	77	17.49	13.49
German,	27	16.4	14
Irish,	15	16.8	13.33+
English,	2	17.5	14
Scotch,	2	17.5	15
French,	2	17	12.5
Total,	125	17.115	13.72

II. Was the first period painful?

	American.	German.	Irish.	Scotch.	English.	French.	Total.
Yes,	16	5	2	1		1	25
No,	61	21	11	1	2	1	97
Blank,		1	2				3
Total,	77	27	15	2	2	2	125

III. Were you in the high school at that time?

Yes,	11	8	1	1			21
No,	66	18	13	1	2	2	102
Blank,		1	1				2
Total,	77	27	15	2	2	2	125

IV. How often do you menstruate?

	American.	German.	Irish.	Scotch.	English	French.	Total.
Once in 3 weeks,	9	4				1	14
" 4 "	55	12	11	1	1	1	81
" 5 "	6	3	3	1	1		14
" 6 "	3	4					7
" 7 "	1						1
" 2 months,		*1					1
" 6 "		*1					1
Irregularly,	*3						3
Total,	77	27	15	2	2	2	125
Three or 4 times a year,		*1					1
Sometimes once a month, Sometimes twice a month,		*2					2

V. Has it appeared regularly from the first period?

Regularly,	29	5	3			1	38
Irregularly,	16	10	3		2		31
Reg'ly at first then irreg'ly,		4					4
Irreg'ly at first then reg'ly,	31	6	9	1		1	48
Blank,	1	2		1			4
Total,	77	27	15	2	2	2	125

VI. How long does menstruation last?

1 day,	1						1
3 days,	6	2	5		1		14
4 "	21	7	3				31
5 "	19	7	1			1	28
6 "	16	10	1	2			29
7 "	12	1	4			1	18
8 "			1		1		2
Irregular,	2						2
Total,	77	27	15	2	2	2	125

VII. What is the character of the flow—scanty or profuse, clotted or clear?

Scanty,	14	6	4	1	1		26
Profuse,	55	21	11	1	1	2	91
Blank,	8						8
Total,	77	27	15	2	2	2	125
Clotted,	28	8	5	1	1		40
Clear,	50	18	10	1	1	2	82
Blank,	2	1					3
Total,	77	27	15	2	2	2	125

*See explanation in the summary.

VIII. Do you suffer pain; severe or slight?

	American.	German.	Irish.	Scotch.	English.	French.	Total.
No pain,	16	9	2			1	28
Slight,	40	15	10	1			66
Severe,	16	2	2	1	2		23
Sometimes slight, severe,	5	1	1			1	3
" " " no pain,							5
Total,	77	27	15	2	2	2	125

IX. If so, when is pain felt, and how long does it last?

No pain,	16	9	2			1	28
Before the flow,	19	2	2	1	1		25
During the flow,	1	1	2				4
At the beginning,	38	14	5	1	1	1	60
Dur'g the middle,	1		1				2
At the end,	2		2				4
Blank,		1	1				2
Total,	77	27	15	2	2	2	125

X. Do you feel any premonitory symptoms of the onset of menstruation?

No sign,	33	20	10			1	64
Headache,	19	2	4			1	26
Backache,	3	1	1				5
Malaise,	6	1		1			8
Irritable temper,	7	3			2		12
Fullness,	3						3
Nausea,	2						2
Epistaxis,	1						1
Vertigo,				1			1
Facial eruption,	1						1
Tenderness of mammary glands,	2						2
Total,	77	27	15	2	2	2	125

XI. Are there any other disturbances during the period?

Headache,	19	2	4			1	26
Nausea,	2						2
Great weakness,	6	2		1	1		10
Discomfort,		1					1
Epistaxis,	1		1				2
Habit of fainting,	2			1			3
No disturbance,	47	21	7		1	1	77
Blank,		1	3				4
Total,	77	27	15	2	2	2	125

XII. What effect has school life had?

	American.	German.	Irish.	Scotch.	English.	French	Total.
More irregular,	1	3			1	1	6
" profuse flow,	6	2	3		1		12
" backache,	1	1					2
" pain,	9	1					10
" regular,	2						2
Less pain,	1						1
No effect,	57	20	12	2		1	92
Total,	77	27	15	2	2	2	125

XIII. How many napkins do you wear?

None,			2				
Av. number worn,	9.38	7.28	5.85	7	4.5	9	
Total average worn							7.16

XIV. Do you wear corsets?

Yes,	67	24	14	2	2	2	111
No,	10	3	1				14
Total,	77	27	15	2	2	2	125

XV. Are they uncomfortable during the menstrual period?

Yes,	14	6	3			1	24
No,	63	21	12	2	2	1	101
Total,	77	27	15	2	2	2	125

XVI. Do you take any medicine? What?

Nothing,	55	23	13	1	1	1	94
Jamaica ginger,	7		1	1		1	10
Alcoholic spirits,	6	3			1		10
Belladonna,	1	1					2
Hot drops,			1				1
Paregoric,	4						4
Cholera mixture,	1						1
Outward applications, such as mustard, etc.,	3						3
Total,	77	27	15	2	2	2	125

XVII. For what purpose is medicine taken?

Nothing taken,	55	23	13	1	1	1	94
For warmth,	2	1	1		1		5
To relieve pain,	20	2	1	1		1	25
To make regular,		1					1
Total,	77	27	15	2	2	2	125

XVIII. Has it become a habit?

	American.	German.	Irish.	Scotch.	English.	French.	Total.
Nothing taken,	55	23	13	1	1	1	94
Yes,	2						2
No,	20	4	2	1	1	1	29
Total,	77	27	15	2	2	2	125

XIX. Have you received instruction from your mother or talked freely with her on this matter?

Not talked at all,	21	7	6	1	1		36
Not talked freely,	21	12	5	1			39
Have talked "	35	8	4		1	2	50
Total,	77	27	15	2	2	2	125

XX. What is your habit of bathing during the menstrual week?

No bath taken,	28	12	3	1			44
Slight local bath,	38	13	9	1		2	63
General bath as usual,	11	2	3		2		18
Total,	77	27	15	2	2	2	125

XXI. Do you dance or take other violent exercise during the menstrual week?

Yes,	47	9	6	1			63
No,	30	18	9	1	2	2	62
Total,	77	27	15	2	2	2	125

It is not uncommon to hear the remark, "If I wanted to ruin my daughter's health, I would send her to the high school," and many similar expressions hardly less strong. When persons making such remarks are asked to give proof for their statements, they are at a loss to substantiate their complaints. There is another side to the question, which if generally known would relieve high schools of much opprobrium, and possibly gain for them commendation instead of blame. To show this side the following questions were asked of the girls, members of the graduating class, relative to their health and general habits for the time they were in attendance at the high school:

1. What is your nationality; age; age at which menstruation began?
2. How many years have you been in the high school?
3. How many hours do you study out of school?
4. How many hours do you give to occupation other than study?
5. What are these occupations?
6. At what hour do you arise? Retire?
7. What social duties do you fulfill?
8. What exercise do you take?
9. How many studies do you pursue during any given period?
10. How many times do you go up and down stairs daily, at school?
11. How are your vacations spent?

12. Do you make any change in your habits during the menstrual week?
13. Do you bathe during the menstrual week?
14. Have any nervous symptoms developed during your high school course?
15. Have you any discharge between the menstrual periods?
16. What is its character?
17. Do you notice any change in menstruation since entering the high school?
18. What is your height; bust measure; waist measure?
19. Do you wear flannels? Corsets?

The class numbered twenty-three girls averaging seventeen and ninety-nine hundredths (17.99) years of age. The majority were Americans, and all were American by birth. Menstruation was established at fourteen and thirty-seven hundredths (14.37) years of age. The average number of years' attendance at the high school was three and six-tenths (3.6+), showing that most of them passed into womanhood at the beginning of their high school life. They spent five hours daily in school, dividing this time between study and recitation. Not more than three regular studies were allowed them at any one time, though some took vocal culture as a fourth study. These lessons were learned partly in school and partly out. In addition to the five hours spent in school, not more than half of which were used in study, four and nine hundredths (4.9) hours on an average were required to complete their lessons. This scarcely goes beyond the eight-hour system of mental labor that at present is so strongly advocated.

What do these girls do with the remaining sixteen hours of the day? Eight more are probably given to sleep, and few of them lost the beauty hours, for the time of their retiring was given as half past ten, arising at half past six in the morning. The remaining eight hours seem to be given to social and physical culture, and that of the best kind for girls. All of them, with four exceptions, spent at least an hour daily fulfilling duties that were a part of the domestic economy. They helped about the lighter housework, had a care of their own bedrooms, did their own mending, and on Saturdays rendered more assistance about the baking and general housework, as they were free from school duties. Society had not yet interfered very greatly with a proper disposal of their time. Fifty per cent. indulged in only an occasional public entertainment, and confined their private social engagements to Friday nights, when a later hour in retiring could be compensated for by an extra hour Saturday morning. Very few tried to keep up with the requirements of a woman of society, and these few attempted it only within the last year at school.

These girls had a fair amount of outdoor exercise in addition to the healthful exercise of light housework. All of them at least walked to and from school, and this was regular throughout ten months of the year. Many of them skated during the season, rode horseback or drove, and in the summer vacation they more than doubled the time spent in the open air.

About two-thirds of them made no change in their habits during the menstrual week; the remaining third kept quieter, avoiding all violent exercise, and taking rest the first day or two if it were possible. No disturbance of the general health had been noticed in most of the cases. Those in whom trouble had developed complained generally of headache. Two cases had weakness of the eyes develop, but the school probably was not solely responsible for this, as they had been instructed in the proper care of eyesight;

but possibly they disregarded the teaching, and did not always select the best light or the proper time for study.

Leucorrhœa was almost unknown among the girls, seventy-four per cent. having no discharge whatever, and the remaining twenty-six per cent. having only a thin scanty white discharge of mucus between the catamenial periods. It lasted only for a short time, and was quite inconstant in its appearance.

When we compare the state of menstruation at the beginning and close of the high school course, we find that forty-eight per cent. had improved and were more regular and suffered less pain. Twenty-six per cent. noticed no change. Thirteen per cent. made no report, and of the whole only thirteen per cent. noticed any increased unfavorable symptoms. This was for the whole three or four years, and is clear evidence that the girls were graduated from the high school in an improved physical and mental condition rather than the reverse (except the increased nervousness as shown in Table XIV). The eighteenth table was prepared to show that these girls are not stunted in physical development, being normal in height and well proportioned in other respects.

Might it not be desirable to meet the girls of any high school occasionally during some part of each school year, and give them lectures upon general hygiene and such special instruction as shall teach them to take the best care of their persons and health at a time when they are apt to be remiss in the matter? It might take time to effect any marked improvement in the careless habits of school girls, but it is believed with a certain amount of knowledge of their own being that they will be better fitted to pass from school life into real living and make stronger, healthier women and mothers.

QUESTIONS SUBMITTED TO THE GIRLS OF THE GRADUATING CLASS.

I. What is your nationality; age; age at which menstruation began?

	American.	German.	English.	Scotch.	Total Average.
Nationality,	13	5	3	2	23
Age,	17.54	17.4	18	19	17.99
Age of 1st menstruat'n,	14.35	13.8	14.33	15	14.37

II. How many years have you been in the high school?

	American.	German.	English.	Scotch.	Total.
3 years,	7		3		10
4 "	5	5		2	12
5 "	1				1
					23

Total average years, 3.54.

III. How many hours do you study out of school?

1 hour,	2				2
2 hours,	2	1	1		4
3 "	2	2	1		5
4 "	1	1			2
5 "	3	1			4
6 "			1		1
7 "	3			2	5
					23

Total average hours, 4.09.

IV. How many hours do you give to other occupations?

	American.	German.	English.	Scotch.	Total.
1 hour daily,	5	1	1		7
2 hours "	1		1		2
3 " "	1				1
5 " "	1				1
1 or 2 hours on Saturday,	2	1		2	5
Variable,	1	1			2
None,	3	2			5
Total average hours, 1.26.					23

V. What are these occupations, other than study?

General housework,	8	4	3	2	17
Sewing,	2				2
Nothing,	3	1			4
Total,	13	5	3	2	23

VI. At what hour do you arise? retire?

ARISE.

5 A. M.,	1				1
5.30 "	1	1		1	3
6 "	3	2	1	1	7
6.30 "	2	1	1		4
7 "	6	1	1		8
Average, 6.33 A. M.					23

RETIRE.

9 P. M.,		2			2
10 "	6	3	3	1	13
11 "	6			1	7
12 to 1 P. M.,	1				1
Total average, 10.34 P. M.					23

VII. What social duties do you fulfill?

None,	1	1	1		3
Occasional entertainments,	10	4	2	2	18
General social duties of a woman,	2				2
Total,	13	5	3	2	23

VIII. What exercise do you take?

Short walk to and from school,	2	1	1	2	6
Long walk to and from school,	4		2		6
Walk to school, and variable walk in the afternoon,	7	3			10
Skating in season,		1			1
Total,	13	5	3	2	23

IX. How many studies do you pursue during any given period?

	American.	German.	English.	Scotch.	Total.
2 studies,		1			1
3 "	7	4	2	2	15
4 "	5		1		6
5 "	1				1
Total average studies, 3.3.					23

X. How many times do you go up and down stairs daily, at school?

3 times running,				2	2
3 times walking,	5	2	1		8
2 " "			1		1
4 " "	5	1	1		7
5 " "		1			1
6 " "	1	1			2
6 " running,	2				2
Total average, 3.87.					23

XI. How are your vacations spent?

Working,	1	3		1	5
Relaxation at home,	4	1	1	1	7
Two weeks in the country,	2	1			3
Away in the country most of the vacation,	6		2		8
Total,	13	5	3	2	23

XII. Do you make any change in your habits during the menstrual week?

Yes, quieter,	4	1	2		7
No,	9	4	1	2	16
Total,	13	5	3	2	23

XIII. Do you bathe during the menstrual week?

Yes,	4	1	2		7
No,	9	4	1	2	16
Total,	13	5	3	2	23

XIV. Have any nervous symptoms developed during your high school course?

Backache,		1			1
Headache,	5	2			7
Headache and cold feet,			1		1
Headache and weak eyes,	2			1	3
Nervousness,	1				1
Weakness,	1				1
Nothing,	4	2	2	1	9
Total,	13	5	3	2	23

XV. Have you any discharge between the menstrual periods?

	American.	German.	English.	Scotch.	Total.
Yes,	5		1		6
No,	8	5	2	2	17
Total,	13	5	3	2	23

XVI. What is the character of the discharge?

White,	3		1		4
Yellowish,	2				2
Total,	5		1		6

XVII. Do you notice any change in menstruation since entering the high school?

No change,	3	2		1	6
More regular,	2	3	1		6
Less pain,	1			1	2
More irregular,	2				2
More regular and less pain,	3				3
More pain,	1				1
Blank,	1		2		3
Total,	13	5	3	2	23

XVIII. What is your height; bust measure; waist measure?

	American.	German.	English.	Scotch.	Total Average.
Height,	5′ 3½″	5′ 5″	5′ 4″	5′ 5″	5′ 4″
Bust measure,	32½″	31¼″	30″	33½″	31¼″
Waist "	24¾″	24¾″	23¼″	25″	24½″

XIX. Do you wear flannels? Corsets?

FLANNELS.

	American.	German.	English.	Scotch.	Total.
Yes,	12	5	2	1	20
No,	1		1	1	3
Total,	13	5	3	2	23

CORSETS.

Yes,	11	4	1	1	17
No,	2	1	2	1	6
Total,	13	5	3	2	23

LITERATURE.

Zur Psychologie des Schreibens. Mit besonderer Rücksicht auf individuelle Verschiedenheiten der Handschriften. Von W. PREYER. Mit mehr als 200 Schriftproben im Text nebst 8 Diagrammen und 9 Tafeln. Hamburg und Leipzig, Verlag von Leopold Voss, 1895, pp. 230.

Die Handschrift. Blätter für wissenschaftliche Schriftkunde und Graphologie. Unter Mitwirkung von Sanitätsrat DR. A. ERLENMEYER und Professor DR. W. PREYER, herausgegeben von W. LANGENBRUCH. Hamburg und Leipzig, Verlag von Leopold Voss, 1895. Monatlich erscheint ein Heft.

The title of the book and the author's name might raise expectations of finding here a substantial contribution to the psychology of writing that would illustrate the stages of growth in a child from the first ataxic incoördinations of the beginner up to a firm control of the muscles and the development of individual characteristics, thus shedding light on the pedagogy of writing. But Prof. Preyer's chief interest in his subject is evidently neither pedagogical nor genetic, but unfortunately graphological. He first catalogues the chief points whereby the handwriting of different persons may be distinguished: *e. g.*, legibility and illegibility, naturalness and artificiality, beauty and ugliness, curves and corners, connected and disconnected letters, punctuation, paragraphing, spelling, interlineations and corrections, size (height and spread), spacing of the letters, proportion between the height of the small and of the large letters, heavy and light lines, angle between pen and paper in writing, slant of the letters (" natural handwriting always slants to the right," pp. 23), spacing of the lines, length of lines, special peculiarities of signatures, color of paper and ink, size of note paper, manner of folding, etc. The individual characteristics remain in a person's handwriting, even when he writes with closed eyes. Mouth-writing and foot-writing show the same peculiarities in addition to the ataxia. Hence, handwriting does not derive its characteristics from the hand, but from the central nervous system. Further experiments are given with mirror-writing, writing upside-down, symmetrical foot-writing, writing with both hands holding the pen, and writing with stationary pen by moving the paper with both hands, as in manipulating the material on a sewing-machine. All of these facts indicate that the writing centre is bilateral and symmetrical. The superfluous accompanying automatic movements in speaking are far more varied and numerous than in writing. In the former case they are drawn off in gesture and facial expression, in the latter they pass into the characteristic features of the handwriting. To study these features of individual handwriting, it is necessary to make an analysis and synthesis of the elements of writing. The first analysis gives eighty-nine

elements, which the author reduces to five by elimination of direction and position. These five are: the point, the straight line, and the curves of right, acute and obtuse angles. In writing the only variants are: (1) the direction of movement of the pen-point, (2) the length of the pen-strokes, (3) their width, and (4) the interruption or pause in the movement when raising the pen.

The body of the book is taken up with a consideration of the importance of individual characteristics in handwriting. These are grouped under the ten heads: (1) Form of the letters, (2) running the letters together, (3) completeness in details of letters, words, and sentences, (4) size of the letters, (5) heavy and light strokes, (6) slant of letters, (7) direction of the lines, (8) length of the lines, (9) space between the lines, (10) signatures.

The following are fair specimens of the reading of character: Whoever is inclined to reduce the incongruities of life, remove contradictions, reconcile enemies, bridge over gaps in thinking, smooth out the rough places and unite the disconnected events in life, will in general also avoid sudden antagonistic changes of movement in writing, and hence will write a round hand, etc., etc. (pp. 73); marked order in harmonious handwriting, showing constancy in form and proportion of the letters, suggests a sense of order and a firm character in general (pp. 135); if the small letters are all minute, but of about the same hight, one can infer moderation in the writer's expectations, simplicity, humility, and disinclination to all pomp and luxury (pp. 162). "More faithful than the reproductions of the lineaments of the face by photography are the reflections of the psychic processes in the handwriting" (pp. 60). The author relies principally on the two books by MICHON, *Système de Graphologie* and *Méthode Practique de Graphologie*. Graphology seems at present to bear about the same relation to scientific work as the old phrenology does to the modern localization theory of brain-functions, and perhaps foreshadows as fruitful and remarkable discoveries when sentimental superstitions and quack theories are replaced by accurate scientific work.

Together with Dr. Erlenmeyer and Prof. Preyer, W. Langenbruch last year began the publication of *Die Handschrift*, a monthly journal devoted to "scientific script-lore and graphology," which promises among other things to contribute to "our knowledge of the history of modern cursive script and in general of the script characters of all nations." The technique of writing, the art of deciphering old manuscripts, and the detection of forged signatures enter into the general plan of the journal as well as the art of reading character through the handwriting. In No. 3 is an account of an interesting case of mouth-writing, in which the subject, an artist who had lost the use of both arms, both wrote and painted with his mouth. Examples of the writing are given. An article in No. 7 on reform in the teaching of penmanship advocates deferring its teaching till the end of the eighth year.

[Since the above was written, the announcement has been made of discontinuance in publication of *Die Handschrift*.]

HERMAN T. LUKENS.

Die Geschlechtlich Sittliche Verhältnisse der Evangelischen Landbewohner im Deutschen Reiche. 1 Band. Ostdeutschland. Von PASTOR H. WITTENBERG und PASTOR DR. E. HÜCKFLADT. Leipzig, 1895, pp. 309-236.

This extensive and painstaking investigation was undertaken at the instance of the general conference of German ecclesiastical societies. The general questionnaire fills nearly six pages and con-

tains seventy questions and is addressed chiefly to pastors. The first twelve questions relate to children born out of wedlock, the next thirteen to infidelity in wedlock. Other lists of questions seek the influence of church, school, family, police, the various methods of associations for prevention, effects of calling, age, religions, confessions, abortions, age of consent, vile literature and diseases, plain speaking and preaching, and scientific literature on sex, effect and different species of amusements, of factory, shop and other work in common, causes of divorce, is it bad form to have many children? or does the "two child system" prevail? etc. The report is based on 900 full and usable answers. A few clergymen expressed surprise or disapproval at such an inquiry, feared they might fall into the hands of children. A few said such things did not interest or concern them. Some held to *laissez-faire*. The per cent. of answers to returns, compared with similar investigations on other topics, is not strange. The reports are treated by the provinces, twenty-one in all, and each province is treated by governmental departments, and in the present volume no general tables or conclusions are presented. This will appear in a later volume. For this reason it is yet difficult to draw general conclusions. In Liegnitz, *e. g.*, children are often left alone while their parents work in the field, and this is a common cause of corruption. With older children too much and too early liberty works evil, so does laxity of the mistress with servants. With most Sunday is the day of most evil. Servant girls that find employment far from home are in peculiar danger. Soldiers are the most corrupting class. Pre-nuptial relations are common, and if followed by marriage, as they are in most cases, especially if pregnancy occurs, are leniently judged, yet in this province about thirteen per cent. of all births are reported to be out of wedlock, more among the upper classes, those among peasants are four per cent, while working classes show only nine per cent. Of all these thirteen per cent., twenty-one per cent were cases legitimated by marriage. A large but variable per cent. of the mothers of such children were themselves illegitimate. Mothers who do not marry often become nurses. Unmarried officials are called the curse of young women. Dances are a very common occasion of evil, so are military parades and manœuvres. Fallen brides have no wreath, no organ and no address at their marriage. Children here average four and a half per family. Parental neglect is the first cause of lapses. On the whole these reports present a sad monotone of iniquity, accented now and then by incidents of exceptional pathos. Other provinces are treated in the same way. The local differences are striking and point to some very definite causes.

G. S. H.

Zur Errichtung Pädagogischer Lehrstühle an unseren Universitäten. Von O. W. Beyer. Langensalze, 1895, pp. 72.

The writer urges that a very important factor of modern culture fails so long as pedagogical seminaries are not established in all our universities. Beyer does not agree with Bonitz that they depend on great personalities, as, *e. g.*, Herbart, for their success, and that apart from these they degenerate to common place. The author has been a member successively of the seminaries of Stoy, Ziller and Rein, and holds that no topic in education is so important as the training teachers, especially of high schools. Wittstock has pled for a pedagogical faculty at the university, which should invite teachers of all grades. Prof. Schiller wants a pedagogical seminary of the university as a branch of the philosophic faculty

and with practice schools. Hofmann wishes the same, with a four years' course for gymnasial teachers, including both the special topic and pedagogical courses. Zange pleads for the same thing. Willman would add a "methodic seminary," and so would Vogt. Adamek pleads not only for an "academic seminary practice school," but for a practice school of intermediate grade. The latter would have a four years' course and two professors of pedagogy in large universities. The president of all should be a professor, who should be largely relieved of administration duties, and there should be a good museum. Here hygiene, psychology and ethics should have practical application. Waldeck pleads for an autonomous practice school and for systematic provision for research. Ziegler, Marsius and Richte want no practice school, but suggest borrowing pupils for special purposes. The latter would have one or two children near at hand to practice on and to observe, and would have all lessons repeated, and theses, and disputations. Uhlig has much inspection and visitation. Wohl wants a pedagogical seminary through the entire triem. Thaulow's seminary is essentially a society. Lindner and Sallwürk both plead for seminaries without connection with the university. The latter is for pure, the pedagogical seminary for applied science. Frick's new seminary of preceptors in the Francke-Stiftung is still different. Muff would have six candidates trained one year by a principal of a school carefully chosen and by two of his teachers. What is wanted is to combine the ideal of a practice with the practice of an ideal, as can be done only in a university with practice school attachments.

G. S. H.

Die Naturliche Auslese beim Menschen. Von Otto Ammon. Jena, 1893, pp. 326.

This book is based on results of anthropological investigations upon candidates for military duty in Baden, and may be called a study of natural selection in relation to heredity. Long-headed people are large, while round heads have small bodies; dark eyes go with dark hair, and coversely and similarly of the relation between eyes and skins; round heads are more likely to have gray, green, or mixed-colored eyes, and long heads to have pure colored eyes; dark complexion is more common among long heads; broad heads are a little more likely to be blonde; long heads and long faces, and round heads and broad faces, more commonly go together. Great cities attract long heads; the second generation shows still more long heads in proportion to round heads, and blonde complexion increases with each successive city generation. This can be due only to natural selection. Hence, the conclusion that for these occupations represented by young soldiers, and in this province, blondeness, dolichocephalism or both mark advantage and also a Germanic racial unity. Here and under these conditions therefore, long-headed, tall and light Germans do best in the struggle for existence. Cities increase height one to one and a half cm., and diminish chest capacity two to three cm., and the size of the body on the whole is from three-sevenths to one and one-quarter years larger for the same age in the city. Beard, pubic, axial and other body hairs and change of voice are all earlier. For city youth, brain action is quicker and easier, athleticism and sex are stronger and earlier. At sexual maturity the young peasant has a large and strong body, broad chest, is moderate and conservative; the city youth is tall, thin chested, and generally excitable; large blonde and dark men develop about alike; small dark men develop at the

same pace as large men, but small blondes very often have less body hairs, and develop slower generally. Among these Germans, long heads are more intelligent, patriotic and aristocratic; round heads excel in trade, mechanical skill, money making; long heads enthuse for science, round heads apply it. The book is a very careful and valuable study.

G. S. H.

The Universities of Canada, their History and Organization, with an Outline of British and American University Systems. Appended to the Report of the Minister of Education, 1896. Toronto, 1896, pp. 440.

This convenient volume presents an account of the colleges and universities of Ontario, Quebec, Nova Scotia, New Brunswick and Manitoba, which has hitherto been hardly accessible in any form. Relatively small space is given to the universities of the United States. Harvard, Yale, Princeton, Columbia, Michigan, Cornell, Johns Hopkins, Clark, Chicago, Oxford and the universities of Scotland have each a chapter. The compilation was made in view of the impending revision of the university laws of Toronto, which it is intimated should be rather radical. The ideal of a great university surrounded by a group of affiliated colleges was transplanted from England and appealed strongly to the popular imagination, and for a time appeared to work well. Experience proved that this scheme did not meet the educational wants of the province, and so in 1887, on the federation of Victoria University, a radical change was made. By this act Toronto became, as the University of London is likely to be made, a teaching university. The Canadian universities recognize the degrees of each other, without exception, for all the purposes of higher education. The University of Toronto has grown within ten years from 348 to 875 students, and practically determines the courses of study in all the high schools, now attended by 23,000 pupils. Interesting is the quoted opinion that "college residence is even, under the most favorable circumstances, more dangerous to the health, manners and morals of students than to reside in respectable homes." The saving of time, labor and anxiety to the professors are important advantages. The more important Canadian charters are printed in an appendix.

G. S. H.

Die Züchtigkeit unserer Rasse und der Schutz der Schwachen. Von Dr. Alf. Ploetz. Berlin, 1895, pp. 240.

This book seeks to found a science of racial hygiene and its relation to human ideals, especially to socialism. It grew from incidents and observations of medical practice, and appeals not only to all interested in the many sciences touched upon, but all physicians who really wish to elevate mankind, and are interested in the opposition between socialism and Darwinism. This problem should merge in that of the investigation and control of variation. The conflict between individual and racial hygiene must be overcome and the best types multiplied. Darwin, Haeckel, Spencer and Lamarck would elevate the race and save it from degeneracy by educating the best traits and assuming that these will be inherited. Galton would have a jury of experts reward the best families. Hiram Stanley would have communities formed wherein the right to bear children is reserved for the few best. Grant Allen would so change laws and customs that marriage should last

only as long as both parties wished, and each girl should feel it a duty and privilege to have as many and as good children as possible. Wallace would make woman's choice the active and selective principle in society. This better sexual selection would assure elevation. Democratic universalistic ideas cause contra selective influences to rule. Inter-race breeding causes degeneration. The poor make the best variants where selection puts in its best work, slaying the worst and bringing out the best. Another volume is promised.

G. S. H.

Der Erziehings Rat. Von ARNO FUCHS. Leipzig, 1895, pp. 72.

The sub-title of this pamphlet is a "practical suggestion for reform in the education of our morally immature youth for state, church and school boards," etc. Its motto is Diesterweg's dictum that the freer the institution of a people, the stricter must be their education. The life work of the late Prof. Dorpfeld was to deepen pedagogy, make it philosophic, and slowly transform the school system on its basis. Family is no longer a social personality. Every employer must feel that all he pays are members of his family and educate them. School cannot do what the family has given up. Church, state, family and school must coördinate their work. This can be done by an educational council, representing each of these four with a doctor or two, some working and business men. It should exercise moral discipline by admonishing youth up to eighteen, conferring with parents, threatening, and in extreme cases prosecuting, commending what is good, suggest legislation, advise with the police, and interceed for pardon in worthy cases, etc.

G. S. H.

Psychology for Teachers. C. LLOYD MORGAN. Edward Arnold, London, 1895.

Principal Morgan in this volume discusses the various factors that enter into the development of a full, vigorous, mental growth, and shows just when and how the instrumentality of the teacher has its operation. In the early part of the volume the elements that enter into consciousness, and the function of association are set forth. Experience and its work of correlating, perception, analysis and generalization, description and explanation from the themes for individual sections and are shown to be some of the factors of mental development on its cognition side, while the background of consciousness is filled with emotional coloring.

In the chapters on language ank thought, and on literature, the relation of language to thought and mental growth is shown, and the education value of the leading departments of school studies is discussed. A strong appeal is made to the teacher to cultivate a literary taste in the pupil and thereby strengthen in him the forces that determine character and conduct.

The work is elementary but well written, and will be found helpful for its scientific spirit and its practical suggestions and illustrations.

J. R. STREET.

BOOK NOTES.

(Not precluding fuller review later.)

Horace Mann, the Educator. By ALBERT E. WINSHIP. Boston, 1896, pp. 101.

This trim booklet is opportune, coming, as it did, just in time for the celebration of the hundredth anniversary of Horace Mann's birthday. The leading features of his life, his salient opinions, are concisely stated. Perhaps too much space is given to his now unedifying controversies with the Boston schoolmasters, and the importance of his Antioch College work is, we think, underestimated.

The University of the United States. Washington, D. C., 1896, pp. 156.

This is the latest document (submitted March 10, 1896) of the Hoyt movement, and contains nine recent addresses before the Senate committee and many scores of letters from public men.

Historic Survey of pre-Christian Education. By S. S. LAURIE, A. M., LL. D. London, 1895, pp. 456.

Professor Laurie prints here with much supplement and many additions the valuable articles which have appeared in recent years in several journals. He treats the Hamitic races and Egypt, the Semites, the Turanian people, India, Persia, Greece and Rome. He modestly calls it an historical survey and not a history, yet thinks nothing essential is omitted. In treating Egypt twenty-eight pages are devoted to literature, religion, society, etc., and ten to education. So of most of the ancient peoples. The reader's chief impression on closing these chapters, will be how little we really know about ancient education, or else how little education in any technical sense there was. It is all interesting and very easy reading, nowhere showing incisive qualities of mind, but always suggestive of patient industry, and a book that everyone interested in the subject must have.

Fear. By ANGELO MOSSO. Tr. from the fifth edition of the Italian, by E. Lough and F. Kiesow. Longmans, Green & Co. London, 1896, pp. 278.

This book is almost a classic, and was long ago translated into German and French. It is by the most eminent physiologist of Italy and based on laboratory experiments on animals and acute observation of childhood and adults. It has chapters on pallor, blushing, trembling, dreams, respiration, expression of face and maladies of fear.

The Proposed Requirements for Admission to the Harvard Medical School. By F. A. ELLIS, M. D. Boston, 1896, pp. 11.

This is a protest against the vote of the Harvard Medical Faculty to require a degree for admission after 1901. Any degree will do,

but some knowledge of physics and biology, he says, should be demanded, as at Johns Hopkins. This vote is a "leap in the air," and not progress. It will make matters worse. "One thing that Harvard Medical School greatly needs at present, is a great scientific awakening, an augmented interest in science for its own sake, and not for the loaves and fishes."

Studies of Childhood. By JAMES SULLY. N. Y., 1896, pp. 527.

This volume is mostly reprinted from previously published papers. It is a popular and not a scientific or even philosophical volume. The author is well read, has collected many striking incidents, writes a lucid and pleasing style, and while he makes hardly a single new contribution of importance, has certainly presented the most useful and instructive book upon the subject, quite superseding to our mind not only Baldwin, but even Preyer.

The Literary Study of the Bible. By G. R. G. MOULTON. Boston, D. C. Heath, 1895, pp. 533.

Professor Moulton here presents us with a charming account of the leading forms of literature, selections from the sacred writings, dividing his material into lyric, history and epic philosophy of the Bible, prophecy, with discussion on classification, Biblical rhetoric, etc. A large part of the book is made up of quotations from the Bible, printed as poetry, in long and short lines, in different sizes of print, with obliteration of Bible verses, and all with suitable reference to late and higher criticism. Altogether it is a very new and happy idea.

All interested should also see the choice little volume "Readings from the Bible," by the Chicago Women's Educational Union.

Modern Missions in the East, their Methods, Successes and Limitations. By E. A. LAWRENCE, D. D. N. Y., Harper's, 1895, pp. 329.

This volume is based on lectures given at Andover and Yale Divinity Schools, and on a 20-months' mission journey around the world. It is designed as a text-book on the science of missions. The descriptive portion is by countries, and the standpoint that of a broad-minded Orthodox clergyman. It is throughout assumed that "heathenism breeds a deadly malaria, affecting even those who are bent on destroying it," but it lacks the judicial quality that we would like now to see applied to the field of pedagogy.

Evolution in Art as Illustrated by the Life Histories of Design. By ALFRED HADDON. London, 1895, pp. 364.

The author, who is professor of zoölogy at the Royal College of Science, Dublin, approaches his subject from the rather novel standpoint of a naturalist, and illustrates it with 138 figures and plates. Uniformity of art form shows homogeneity of blood, and florescence often results from race mixtures. New Guinea is selected as an example of the method. The art of its five distinct regions is sketched, decorative transformation of artificial objects or skeuomorphs follow. Then come biomorphs, physiographs and heteromorphs, or transformations of natural objects. Decorations are for art, information, wealth, magic, and religion. The papers are full of suggestions on theories of teaching drawing.

A New Life in Education. By FLETCHER DURELL, Ph. D. Philadelphia, 1894, pp. 288.

The author is a professor in Dickerman College, and this is a prize book published by the American Sunday School Union, and is No.

9 of the Green Fund books. It discusses the place of the religious element in education and the place of the highest type of education in the near future. A worthy, but by no means a striking book.

Elementary Education. By ROBERT GREGORY, D. D. London, 1895, pp. 192.

This is a story of the rise and progress of education in England, by the dean of St. Paul, beginning a century or more ago and coming down to the present time, dealing chiefly with school boards and parliamentary acts.

Education. An Introduction to its Principles and their Psychological Foundations. G. H. HOLMAN, M. A. Dodd, Mead & Co., N. Y., 1896, pp. 536.

To give beginners a clear and intelligible outline of education as a science, and to suggest, but not to discuss some of the deeper and more philosophic aspects, is the author's aim. He was once professor of education in Wales, and has been a practical teacher for a quarter of a century. He aims to be fundamental and discusses the psychology of mind, feeling, knowledge, will, etc., and tells how to develop ideas from percepts. It is a good, useful, progressive and interesting, but in no sense an epoch-making book.

Health in the Home. By E. MARGUERET LINDLEY. N. Y., 1896, pp. 414.

The author is a lecturer in health culture and an advocate of Swedish gymnastics. After chapters on circulation, spine, digestion, etc., the application of principles to children's gymnastics is treated, with many illustrations of movements, some of which are unique. The book is an intelligent application of good principles, and must prove useful in every family where there are children.

The Care of Children. By ELIZABETH ROBINSON SCOVIL. Philadelphia, 1895, pp. 360.

The author, who is superintendent of Newport Hospital, writes interesting chapters on nursing, feeding, diet of school children, dress from early stages of childhood, the bed, toilet, baths, care of teeth, eyes, ears, hair, nails, feet, ailments, physical deformities, emergencies and care of boys and girls. The book is full of wise common sense.

Out of the Cradle into the World, or Self-education through Play. By T. BENJAMIN ATKINS. Boston, 1895, pp. 364.

This book shows how the child's mind and body start growing, first nature-taught, then teacher-taught, and is dedicated to Froebel. It pleads for prolonging infancy and childhood by play, which is described in successive chapters, as promoting development of body, senses, mind, imagination, song, mimetic power, industry, memory, sensibility, morals, taste, etc. The writer has done much reading of Emerson, Drummond, W. T. Harris, James, Miss Blow, Miss Harrison, quotes aptly, tells many good incidents of childhood, and the book breathes a healthy sentiment, but one looks in vain for traces of scientific method, spirit, or much knowledge of recent anthropological studies.

Der Deutsche Student. Von THERBOLD ZIEGLER. Stuttgart, 1895, pp. 240.

Here are seventeen notable lectures on the German students at the end of the 19th century, by an eminent professor of philosophy at the University of Strasbourg, and given with great approval to students

themselves. The chief aspects of student life are plainly discussed from a very high standpoint. Dueling is not *entirely* disapproved of, nor beer-drinking, but the greatest moderations are inculcated. One seldom sees stronger denunciation of licentiousness. As a picture of contemporary German student life and sentiment, nothing in recent years has equaled this book.

Handbuch der Taubstummebildung. Von EDUARD WALTHER. Berlin, 1895, pp. 748.

Dr. Walther, who published an elaborate history of deaf-mute culture in 1882, now associates a number of experts with himself to write this voluminous pedagogy of deaf-mutism, which is by far the best of its kind. Sections on school rooms, hours, teachers, apparatus, on causes and results of deaf-mutism, on teaching language, religion—both Catholic and Protestant—liturgy, arithmetic, geography, history, writing, drawing, gymnastics and industry, are well brought out and merit far fuller treatment than our space permits. To see how every branch of school work needs special adaptation to the deaf shows painfully, yet instructively, how great are the details of their disadvantage.

Die Beeinflussung Einfacher Vorgänge durch Körperliche und Geistige Arleit. Von G. BETTMANN. 1894, pp. 63.

This thesis proves by careful experiment that mental fatigue is greater after bodily than after mental work, so that physical culture cannot be regarded as a preparation for study. Motor ability is reduced by study and increased by physical exercise. The effects of the fatigue of night work often persist for days.

Schuluntersuchung über das Kindliche Gehörorgon. Von DR. F. BEZOLD. Wiesbaden, 1895.

This elaborate investigation is the first demonstration that the mental development of a child is checked in almost exact proportion as the acuteness of hearing is impaired.

Die physische und sittliche Entartung des modernen Weibes. Von MAX WOLF. Leipzig, 1794, pp. 114.

The author goes beyond Schopenhauer in emphasizing the degeneracy of modern woman, and sees everywhere signs of hysteria, imperfect physical growth, perverted appetites, sexual weakness, nervousness, over-emancipation, fashion worship, horror of child-bearing, and coquetting. All his forebodings are gloomy.

Die Reform des Judenthums. Von MONTZ LEVIN. Berlin, 1895, pp. 103.

Dr. Levin is preacher of the Berlin Jewish Reform Society, and this pamphlet commemorates the fiftieth anniversary of his association. He pleads for what he calls "historic development," and would therefore interpret the Mosaic law and church ceremonies and priesthood according to the demands of a new age. The new rabinical spirit would relax old sumptuary laws. Faith and positive religion are wanted. Uncovered heads in church, the eating of pork under certain conditions, female voices in the choir and both sexes in the same room in church, belief that the theocracy is at an end, are some of his postulates. The positive tenets are yet more interesting.

The Common School System of Germany and its Lessons to America. By LEVI SEELEY, PH. D. New York, E. L. Kellogg & Co., 1896, pp. 251.

This book seeks to picture the Prussian school system, and to draw from it lessons applicable to America. The author has spent four years in Germany. The two needs in this country most insisted on are professional training for teachers and compulsory education for seven years. Best of all, is the account of the training and status of German teachers. Here the author wants superintendents with large power appointed for ten years, and teachers' positions to be made permanent and pensions provided. Most American readers will be surprised that the kindergarten is not allowed to teach any primary branches, nowhere incorporated by the state, and that kindergartners have little training in the land of Froebel. The book is a careful and valuable study.

Studies on Education. Edited by EARL BARNES, Professor of Education in Leland Stanford, Jr., University. July, 1896, pp. 40.

These advance sheets, constituting the first of ten such studies to appear during the next school year, are prefaced by a valuable characterization of current methods of child study as follows. Back of all is the universal, indirect but half conscious study of children, based on love, and conditioning past progress in education. Child study is to psychology as horticulture is to botany. This undirected method of home and daily life, and school, cannot be the basis of education more than medicine can rest on instinctive and unstudied doctors. Next is Principal Russell's method of miscellaneous written collections without hypotheses; third, personal reminiscence; fourth, personal letters and journals of children; fifth, reminiscent autobiographies; sixth, artistic interpretations; seventh, direct studies; eighth, biographies of children; and ninth, statistical studies on lines of a syllabus. The articles are a "Study of Children's Stories," showing how objective they are, how little æsthetic or moral, how full of names, and how unusual events within children's reach are preferred; "A Study of Fear" shows how fear is chiefly ignorance; a remarkable series of six drawings shows a typical evolution of a man, and the first of a most promising series of ten papers on "Discipline" conclude this part of the number.

Deaf-mutism: A Clinical and Pathological Study. By JAMES KERR LOVE, M. D. With Chapters on the Education and Training of Deaf-mutes, by W. H. Addison, A. C. P. 8vo, cloth, 369 pp. Glasgow, James MacChose & Sons, 1896.

This work is an extremely important contribution to the literature of the Defective Classes. Its purpose is indicated in the statement of the authors, that "it originated in a desire to found a scientific classification of the deaf for educational purposes." It comprises (1) a discussion of the clinical and pathological aspects of deaf-mutism, and (2) a discussion of the education of deaf-mutes. Each of these discussions is the work of a different author, but the point of view has been evidently much the same in both.

The first section has to do with the nature, causes and treatment of deaf-mutism. It includes a mass of facts and inferences relating to the general character of deaf-mutes, the anatomy and physiology of the ear, relative differences in hearing, congenital and acquired deafness, the morbid anatomy of deaf-mutism, and the diagnosis, prognosis, and treatment of the latter. Comparisons are

made between deaf-mutes and normal individuals. The histories of several families are traced out, showing the tendency of congenital deafness to be transmitted. The relation of consanguineous marriages to deaf-mutism is treated. Reports of a large number of cases are given, illustrating the influence of different diseases in producing deafness. And, finally, the difficulties and possibilities in the treatment of deaf-mutism are discussed. The following are some of the more important conclusions of this section of the work: (1) There is, in general, no physical inferiority in deaf-mutes, as compared with normal individuals. (2) Congenital deafness is hereditary, and this form includes most of the cases of deaf-mutism. (3) Consanguineous marriages tend to produce deteriorated offspring, and should be discouraged, as should also the marriage of the congenitally deaf. (4) Acquired deafness is usually due to disease of the internal ear, and congenital deafness to arrested growth and malformations. And (5) while the prospect of successfully treating deaf-mutism is not altogether hopeless, it is, neverthelsss, very grave; because, in the first place, it occurs in early childhood, when its presence is difficult to trace, and because, in the second place, it is generally due to damage of the internal ear, the auditory nerve, or its connection in the brain.

The second section of the book gives an historical résumé of deaf-mute education, and then discusses the deaf-mute in his uneducated state, the various systems that have been devised to educate him, the results of that education, and the condition at present of deaf-mute institutions and methods of training. This section is written from the standpoint of an experienced teacher of deaf-mutes, and has the very greatest interest and value for educators as well as for all those who, from whatever motive, may be drawn to the study of such defectives. It is an illustration of how much scholarship and labor are being expended to eke out what seems to be the parsimony of nature, and to raise even the humblest in natural endowments to a comparative equality with their fellows One cannot read such a work without feeling that the world has advanced somewhat since the time when people like the Spartans would not permit deaf-mutes to live, or when such wise men as Aristotle could declare that they were senseless.

The book, as a whole, is well written, and well printed. It is thoroughly readable, and its numerous tables and subject index admirably adapt it for reference.

GEO. E. DAWSON.

The Science of Nutrition. By EDWARD ATKINSON. Boston, 1896, pp. 246.

In this volume Mr. Atkinson has compiled his essays on the Aladdin oven and added dietaries. Nutritive values of food materials, tests of slow methods, etc., by Mrs. E. H. Richards, Mrs. M. Donnell and Prof. W. O. Atwater, with an appendix of letters and reports. Altogether it makes a valuable book and must be welcome to every mother who is responsible for a kitchen.

The University of Aberdeen. By R. S. RAIT, M. A. Aberdeen, 1895, pp. 382.

This is a careful history of the third Scotch University, from its foundation in the 15th century to the present time. Even since 1860 the average number of students has increased from 600 to 800, and it seems well equipped to meet the needs of the new age and to keep the honorable traditions of the past.

The Universities of Europe in the Middle Ages. By HASTINGS RASHDALL, M. A. 2 vols., pp. 562 and 832. Oxford, Clarendon Press, 1895.

These volumes represent eleven years of work by a fellow and tutor of New College, Oxford. It utilizes to the full the great works of Denifle, Chatelain and Fourter, and the works stimulated by the octocentenary of Bologna. The three typical universities of Paris, Oxford and Bologna are described more fully, with brief notices of the seventy-three others. The standpoint is chiefly constitutional, but there is much of interest on studies, customs, buildings, etc. The author's wide acquaintance with the general history of the times gives his work a wide perview, and aids in making it of great interest even to the general reader.

Froebel's Gifts. By KATE DOUGLAS WIGGIN and NORA ARCHIBALD SMITH. Houghton & Mifflin, Boston, 1896, pp. 202.

This is the first of three volumes on the theory and practice of the kindergarten, and is chiefly the work of the second of the two authors. As the last of many volumes on the subject, it is as it should be, also the best. The author has had mature experience as a kindergartner, and is full of admiration for and fills her foot notes with quotations from W. T. Harris, Geo. P. Brown, Miss Marwedel, Miss Blow, and other metaphysicians. That she evidently does not know German is little loss in this line, as most of the best of even Froebel is accessible in English. Her mind is candidly open to any results of child study, but the latter seems as yet not to have much impressed her. It is, altogether, by far the best book in any language on the subject, and we hope that in later volumes the opportunities that child study already affords for fruitful suggestions will not be missed.

Paidologie. Von OSCAR CHRISMAN. Jena, 1896, pp. 96.

This doctor dissertation is sub-titled sketch for a science of the child, and is approved by Professor Rein. Dr. Chrisman studied these subjects two years, at Clark University, before going abroad; is, so far as we know, the originator of the term paidology, and believes it should be represented by professors in universities and normal schools. He has certainly made out an unexpectedly strong *prima facie* case here, with his careful description of eighty-three distinct tests for each child, his 517 titles of works on the subject. Such a desideratum certainly never seemed so near to us as after reading this thesis. We trust some suitable institution will give the author a chance to see what he can do in a pioneer organiza tion of such a department. The pamphlet should be at once published in English and in the hands of all interested.

Uranisme et Unisexualité: Etude sur Différentes Manifestations de L'instinct Sexuel. Par MARC ANDRE RAFFALOVICH. 8vo, pp. 363. Paris, 1896.

This book belongs to the *Bibliothèque de Criminologie* series, issued under the direction of Dr. A. Lacassagne. As indicated by the title, it is a study in sexual pathology, and covers the same ground of loathsome and infectious human nature that is just now being so assiduously cultivated by continental writers. The author begins his work with a tabular résumé of all the sexual instincts. These are in substance as follows: (1) Congenital sexual inversion or uranism persistent throughout life, either without heterosexual relations or in spite of them; (2) Congenital sexual inversion de-

pendent upon circumstances or caprice, and after puberty combining with acquired heterosexuality, or giving place to it; (3) Congenital sexual inversion or partial uranism, not excluding the heterosexual instincts already present before or at the time of puberty, and either repressing those instincts, combining with them, or giving place to them; (4) Congenital heterosexuality, persistent throughout life, without unisexual relations, or in spite of them; (5) Congenital heterosexuality dependent upon circumstances or caprice, and after puberty combining with acquired unisexuality or giving place to it; and (6) Congenital heterosexuality, not excluding unisexual instincts already present before or at the time of puberty, and either repressing those instincts, combining with them, or giving place to them.

It is with the first three groups of instincts, namely, the unisexual, that M. Raffalovich is concerned. The distinguishing quality of these instincts, as the term "unisexual" would imply, is that they are excited only by a person of the same sex. Herein they differ from the heterosexual feelings, which are awakened by the opposite sex. The unisexual instincts are made to include not only the lowest forms of sexual inversion, such as pederasty, but also the highest forms of attachment for individuals of the same sex, such as friendship. A distinction is made between the sexual invert and the sexual pervert, the former being typified by the uranist, the latter by such creatures as the massochist, the sadist, or the sexual fetichist. The invert, bad as he may be, is superior to the pervert. He is less of a libertine, less vicious, and may have qualities of character that make him lovable, such as self-respect, prudence, and the various lofty sentiments that cluster about the highest and best friendships.

The wide range of unisexuality is shown by an imposing list of historical sexual inverts. This list includes disciples of the Greek Eros, from Plato down; many who have scarcely risen to the Platonic ideal, such as Edward II, James I, William III, Henry IV of France, Frederick, king of Wurtemburg, and the Great Frederick himself; besides innumerable princes, dukes, nobles, bankers, artists and æsthetes, down to the lamented Oscar Wilde. In fact, a reader the least bit credulous can hardly look through these pages without feeling,—what he has never before suspected, perhaps,—that the world has got most of its philosophy, poetry, and government from men who would be first-class subjects for a pathological clinic. Such friendships as those existing between Molière and Baron, Montaigne and LaBoëtie, Goethe and Schiller, the brothers Grimm and the brothers Goncourt, Michelet and Poinsot, Liebig and Woehler, and others, are identified with unisexuality; while Rousseau, the philosopher; Michel-Angelo, the artist; Edward Walpole, the statesman, and Walt Whitman, the poet,—are presented as individual illustrations of uranism par excellence.

In discussing these more illustrious types of sexual inversion, M. Raffalovich shows a very liberal and, usually, a discriminating spirit. He is disposed to adopt the maxim of Goethe, that every man has a right to such a philosophy as will not destroy his individuality, providing at the same time that this philosophy does not destroy the individuality of others. Even the sexual invert may be allowed to hold such a philosophy. But when uranism takes on the form of vulgar and abhorrent intercourse between individuals of the same sex, the author has nothing but condemnation for it. In commenting upon the jury that convicted Wilde, he says that it vindicated the honor of English juries. The question may arise in

the mind of the ordinary reader as to whether M. Raffalovich may not be too liberal with the higher uranists, like Walt Whitman. When he expresses his admiration for the lofty ideals of the latter, and praises him as being the prophet of higher conceptions of sentiment and conduct than common minds have risen to, it seems to me he overlooks the logical application of such sentiments and ideals to life as men live it. There was a time when the sentiments of Oscar Wilde, both in regard to æsthetics and ethics, were applauded. He was the prophet of a wider liberty, a more complete self-expression than conventional and common-place mortals dare suggest even to themselves. But Oscar Wilde's sentiments were no better than his life, and no worse. His philosophy was lived before it was written. Just so was Walt Whitman's and other men's. The test of all these philosophical and poetical ecstasies is their effect upon life. Judged by this criterion, it may well be that every sexual invert, no difference how many books he writes, or how many works of art he produced, is a misfit in creation, and must be eliminated in the natural order of things.

It is the opinion of M. Raffalovich that the tendency of our epoch, especially in its contempt for religion, renders chastity more difficult for everyone and particularly so for the weak. In this connection he says, "If chastity were a thing held in greater honor than it is, I should recommend it to medical advisers as a remedy more efficacious for sexual inversion than encouraging the patient to keep a mistress as a preparation for marriage and paternity." He also has a word of blame for the women who are instrumental in perpetuating morbid sexuality. In their choice of male companions they do not help to eliminate the diseased elements of society. In fact, when they have passed a certain age without attracting the homage of good men, they often surround themselves with men of unnatural instincts. Thus it is that individuals who should be confined in asylums and penitentiaries, are welcomed to a society throughout which they spread their infection.

The work, as a whole, is a scholarly and profoundly suggestive one. Perhaps for a certain radiant optimism, and a certain prudery, all too common, that will not discuss such problems, it may reveal too clearly how thoroughly vicious men can become. Like Krafft-Ebing's *Psychopathia Sexualis*, it suggests "The Chamber of Horrors" in Madame Tussaud's wax-work. If men were as chaste as they ought to be, such works would not be written. Since they are not thus chaste, both they and society should hear the verdict of science from those who are qualified to deliver it. There is nothing more promising in modern scholarship than the tendency of men of scientific training to take up these questions of an intrinsically ethical nature that have so long been relegated to the domain of sentiment.

On the other hand, the work seems open to adverse criticism in two important particulars. In the first place, it makes sexual inversion include too much. How the friendship of Goethe and Schiller, for instance, can be used to illustrate a discussion on morbid sexuality, is a mystery. As well say that the friendship of David and Jonathan, or, more pertinently, of Carlyle and Emerson, was inspired by inverted instincts. The disposition to thus classify these historical friendships is a part of that straining after rigid classification that is the vice of modern science. There is a class of minds, making a good deal of noise just now, that think they have explained things if they get them arranged in some sort of a category. Ever since the pronunciamento was sent forth announcing to the world that life involves ultimately but two pro-

cesses, namely, the Nutritive and the Reproductive, certain men have been controlled by a kind of scientific obsession that impels them to refer everything to one of these processes. Now it is obvious that the friendships of Goethe and Schiller, and of Carlyle and Emerson, cannot be irradiations of the nutritive instincts; therefore, they must be irradiations of the sexual instinct. We have illustrations of the same naïve logic in those cases where men trace religion and æsthetics to a sexual origin. These things can have no intrinsic relations to the processes of getting food and digesting it; therefore they must have grown out of the breeding instinct. One can hardly reply to such theories in a better manner than that of the shrewd, simple-minded Lincoln, whon he said in criticism of a very learned and pedantic work: "If a man likes that sort of thing, I should say it would be the very thing he would like."

Again, sexual inversion is made too respectable altogether. Perhaps, indeed, that was the object in putting it in such respectable company as that of Goethe, the brothers Grimm, etc. It is true that when it shows its cloven foot in such grossness as sodomy, debauching of boys, etc., it has been treated as it deserved. But when it has refined its manners a little, and has clothed itself in some sort of poetry or philosophy, it is quite genteel enough for polite society. Now if there be any justification for placing Oscar Wilde and Walt Whitman in the same class of sexual inverts, I am unable to see why the former should be pilloried and the latter pedestaled. The one has been found guilty before an English jury of corrupting young men by physically defiling them. It would be quite easy to convict the other before an American jury of corrupting young men by mentally defiling them. Each has abused the generous philosophy of Goethe. In choosing a creed of life that would not destroy their individuality, they chose one that has encroached dangerously upon the individuality of others. Each is an anti-social character, for each has stood for an inversion of those instincts that have made not only social, but biological evolution possible. However esoteric the love of which they were the votaries, and however beautiful the terms in which that love was extolled, it is none the less an unnatural love, even by the author's own showing; and as such it is about as wholesome and satisfying for the normal appetite as the apples of Sodom.

However, while we are not able to see how such friendship as that of Goethe and Schiller may be linked with sexual inversion, or how "Walt Whitman belongs to the same category of sages and moralists as Plato, Jesus, and Goethe," we agree entirely with what seems to be the prevailing spirit of the book. This spirit condenses itself in the following closing words: "We must teach, before all, reality, truth and sincerity, if we would wish that the sexual man, heterosexual or unisexual, may not sink beneath the burden of his sexual life."

GEO. E. DAWSON.

Handbuch der Schulhygiene. Von Dr. LEO BURGERSTEIN und Dr. AUG. NETOLITZKY in Wien. Mit 154 Abbildungen. Jena, 1895, pp. 429.

This handbook, which forms the First Part of the seventh volume of Weyl's Handbuch der Hygiene, is probably the best reference book upon the whole subject of school hygiene to be found in any language. The part relating to school buildings, school-rooom sanitation and the hygiene of instruction, is written by Dr. Leo Burgerstein, well known by his studies of fatigue during a school hour

and other hygienic subjects. The part relating to school diseases is written by Dr. Netolitzky of Vienna. The book is up to date, except in one or two points upon which important light has been thrown by investigations reported too late for the author's consideration, and it is scientific in character. A specially valuable feature is the literature mentioned. The bibliographies given at the end of each section contain reference not only to German, but also to French, English and American literature. The book is so good in this respect that it ought to be better. For example, among English investigators the work of Roberts and Clouston seems to have been overlooked, and among Americans the important investigations of Hartwell, Peckham, Boas, and others are not mentioned. Dr. G. Montgomery West fares better, but his surname seems to have been taken as indicating the part of the country from which he came, and he figures both in the text and in the bibliography as Dr. Montgomery. Apart from criticism of such minor matters and the query whether it is right for a book on hygiene to put so much important matter in nonpareil type, the highest praise must be awarded to this book,which will remain without a rival until the new edition of Eulenberg and Bach appears.

W. H. B.

Ueber Schulgesundheitspflege. Von Dr. phil. u. med. LUDWIG KOTELMANN, Augenarzt in Hamburg. Mit zahlreichen Abbildungen. Handbuch der Erziehungs-und Unterrichtslehre für höhere Schulen. Herausg. von Dr. A. Baumeister, Zweiter Band, 2 Abt., pp. 260-397.

This treatise on school hygiene by the distinguished editor of the *Zeitschrift f. Schulgesundheitspflege* is as good a book in its more limited field as the preceding. The author confines himself to the topics that it especially concerns the teacher to be acquainted with. While the treatise by Burgerstein and Netolitzky is the best handbook, this book by Kotelmann is the best outline for the teacher. The book is written in an admirably concise style, and by the aid of numerous tables a vast number of important facts and principles are presented. The bibliographies are good, but limited almost entirely to German literature.

W. H. B.

School Management, with the Principles and Practice of Teaching. By JOHN MILLAR, B. A., Deputy Minister of Education for Ontario. Toronto, U. Briggs, 1896, pp. 292.

This book discusses physical culture, the place of religion, moral training, questioning, qualification, organization, programmes and many other topics, but is very general, being the opposite in this respect to the far better book of Mr. Garlick. Mr. Millar takes that attitude so common among teachers of stating commonplaces in a careful, oracular way, as if he were phrasing educational laws. It is a very unedifying book, by a man who, it would seem, could not possibly have read and pondered all the books he appends the names of, and has not caught the spirit of the new education.

A New Manual of Method. By A. H. GARLICK, B. A. N. Y., Longmans, Green & Co., 1896, pp. 331.

The first part treats headaches, light, ventilation, heating, drill, playground, furniture, wall decorations, discipline, punishments, anger, crying, cowardice, lying, class teaching, object lessons, and the following special methods: on kindergarten, arithmetic, read-

ing, spelling, writing, geography, history, English, science, and music. The treatment is remarkably precise and objective at every point. Every teacher would profit by it.

Smithsonian Contributions to Knowledge. The Composition of Expired Air and its Effects upon Animal Life. By J. S. BILLINGS, M. D., S. WEIR MITCHELL, M. D., and D. H. BERGEY, M. D. Washington, 1895, pp. 81.

Dr. Bergey, under the supervision of Drs. Billings and Mitchell, has repeated the experiments of Brown-Séquard and d'Arsonval and others, and has made new tests of the constituents of expired air, experimenting both upon men and animals. The results are quite in conflict with the views generally accepted until recently, and indicate that there is no peculiar organic matter of a toxic character in expired air. In the light of these investigations, together with those of Lehmann and Jessen and others, all of the handbooks of school hygiene must be revised. It appears "that the problem of securing comfort and health in inhabited rooms requires the consideration of the best methods of preventing or disposing of dusts of various kinds, of properly regulating temperature and moisture, and of preventing the entrance of poisonous gases like carbonic oxide derived from heating and lighting apparatus, rather than upon simply diluting the air to a certain standard of proportion of carbonic acid present." The paper is one of great importance, résuméing the work of others, giving a bibliography, and making important conclusions.

W. H. B.

The *Zeitschrift für Schulgesundheitspflege*, No. 5, 1896, cites some specially sensible advice from Krafft-Ebing in regard to the education of nervous children. Among other precepts he gives the following: Children of nervous disposition belong out of doors, in the country, or at the seaside. Intense sense-simuli, the heat of the sun, long journeys, high living, tea, coffee, dancing, novel reading, premature introduction to adult life, should all be avoided. A properly conducted education can do much for such children. They should be kept out of school as long as practicable. Premature awakening of imagination by stories, intellectual overstrain, and especially the imposition of studies which they do not like and for which they have no talent, should be avoided. Nervous children are not fit for the scholarly professions. They should be directed rather to business and technical pursuits. Many suffer shipwreck because they miss their profession.

W. H. B.

Dr. Gustav Richter in *Lehrproben und Lehrgänge*, October, 1895, reports experiments upon mental fatigue in relation to school instruction made by Dr. Kolesch and Dr. Koetschau in the Gymnasium at Jena. The methods of Burgerstein and Kraepelin were adopted, but modified so that the work required corresponded as nearly as possible to that in the ordinary school tasks. The pupils were required to solve simple problems in algebra, and in two experiments to inflect Greek verbs, but they were not limited in time. Estimating the fatigue from the quantity of work done, the degree of rapidity in the work, the errors, and the corrections, it appeared that with the conditions thus approximating that of ordinary school work, no serious fatigue was caused during a school hour. Dr. Richter emphasizes the great rôle that change should play in school work, and its influence in averting fatigue. The fol-

lowing programme is recommended as suitable for a four-hour session:

1st lesson, 50 minutes; pause, 10 minutes.
2d lesson, 50 minutes; pause, 15 minutes.
3d lesson, 50 minutes; pause, 20 minutes.
4th lesson, 45 minutes.

W. H. B.

For several years the reports of the Connecticut Board of Education have been important contributions to educational literature. In their report for 1896, pp. 236-400, Secretary Hine has made another valuable contribution to our knowledge of the condition of rural schools in New England. In the small rural county of Tolland, situated but a short distance from the capital of the state, a special agent, Mr. M. A. Warren, examined all the schools for the purpose of ascertaining the work done and the advance made. It was found that 36% of 2,850 pupils examined were unable to read; one-fourth of those unable to read were over eight years of age. Of 1,031 children over ten years of age, 649 failed to begin sentences with capital letters; and out of 205 children eleven years of age, 105 failed to use the period correctly; 126 out of 265, all over twelve years, failed to spell Wednesday correctly. In one town no children under nine years of age were found able to add $\frac{1}{2}$ and $\frac{1}{4}$. In the county 289 out of 338 failed to tell what per cent. 3 is of 12, though all of these had studied interest. Elementary science, drawing, singing and physical culture are called "the neglected studies;" while "in the ungraded schools * * * civil government is practically unnoticed, history is neglected by an overwhelming majority, and geography, if it be ultimately studied, is not begun as soon as it should be."

T. R. Croswell.

A Practical Introduction in English Prose Composition in Three Parts. By E. C. Marchant, M. A., and Lewis Sergeant, B. A., Cam. Part I, The Sentence. London, 1895, pp. 134.

This is a scholarly work of the kind that might be expected from Mr. Marchant and his collaborator. It is not a mere statement of the principles of English syntax, but rather an illustration of the manner in which these principles are followed by the masters of English prose style. Numerous exercises are given, and the writers follow a sound pedagogical method in making them consist for the most part of good English to be imitated rather than of bad English to be corrected. W. H. B.

In the section for school hygiene at the eighth International Congress for Hygiene and Demography at Buda-Pesth, Dr. Bresgen of Frankfurt gave an address upon the causes of nervous headache among school children. According to the report given in the Vienna *Medizinische Presse*, Sept. 9, 1894, he divided these causes into four groups: first, diseases of the brain; second, general physical weakness caused by pronounced disease or by lack of nutrition; third, causes for which the school is especially responsible; fourth, certain diseases of the nose, ears, eyes, teeth, and naso-pharynx. Among causes for which the school is largely responsible are the following: beginning the school at too early an hour in the morning (German schools usually open at 7 or 8 o'clock A. M.), strain of the eyes, and mental overpressure. The overstrain of pupils in the school is due less to overburdenings with subject matter than to improper presentation of it. Nothing is so wearing as instruction

unadapted to the child's stage of development. An improperly arranged programme, where there is not a suitable alternation of easy and difficult subjects, is another cause of overstrain. The welfare of the children will be best preserved when the arrangement of a programme is not permitted without medical coöperation. A further cause of nervousness and headache among children is the plan frequently adopted of placing all the instruction in the forenoon. Such a plan may be serviceable to the teachers, but it is not calculated to further instruction or lighten the tasks of the pupils.

W. H. B.

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